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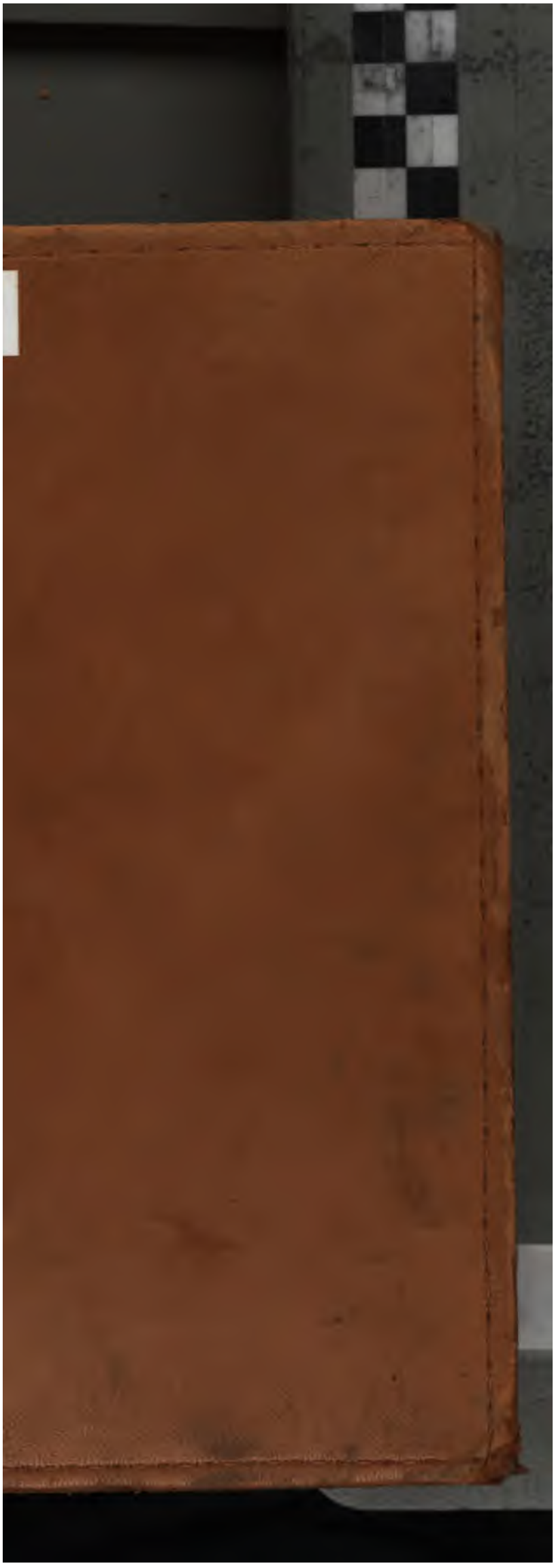

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OF THE

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FOR THE

FIRST SESSION OF THE FORTY-EIGHTH CONGRESS,

1883-'84.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1884.

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48TH CONGRESS, 1st Session. } HOUSE OF REPRESENTATIVES. { Ex. Doc. 1, Part 2.

REPORT

OF THE

SECRETARY OF WAR;

BEING PART OF

THE MESSAGE AND DOCUMENTS

COMMUNICATED TO THE

TWO HOUSES OF CONGRESS

AT THE

BEGINNING OF THE FIRST SESSION OF THE FORTY-EIGHTH CONGRESS.

IN FOUR VOLUMES.

VOLUME I.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1883.

REPORT

OF

THE SECRETARY OF WAR.

WAR DEPARTMENT,
November 15, 1883.

To the PRESIDENT:

I have the honor to submit the following annual report of the administration of this Department:

EXPENDITURES, APPROPRIATIONS, AND ESTIMATES.

The expenditures by requisition under the direction of the War Department during the fiscal year ending June 30, 1883, were as follows:

Salaries, contingent expenses, and postage	$2,146,005 10
Military Establishment—Army and Military Academy	27,830,976 15
Public works, including river and harbor improvements	15,659,337 31
Miscellaneous objects	4,154,736 86
Total	49,791,055 42

and the sum of $1,663,151.30 was credited under the act of March 3, 1879 (20 Statutes, 420), to the subsidized Pacific railroads, for transportation services rendered the War Department during the fiscal year 1883, and prior years.

The appropriations for the fiscal year 1884 are as follows:

Salaries, contingent expenses, and postage	$2,248,121 66
Military Establishment—Army and Military Academy	24,951,557 50
Public works	1,925,344 80
Miscellaneous objects, including Signal Service	2,641,928 07
Total	31,766,952 03

The estimates for the fiscal year ending June 30, 1885, as revised by me, are as follows:

Salaries, contingent expenses, and postage, including one-third of the estimate of the superintendent of the State, War, and Navy Department Building	$2,322,078 33
Military Establishment—Army and Military Academy	27,136,152 41
Public works, including river and harbor improvements	11,649,049 62
Miscellaneous objects, including Signal Service	3,278,926 42
Total	44,386,206 78

The principal items of increase of the estimates for salaries over the appropriations for the present fiscal year are for two clerks and three laborers in the office of the Secretary, fifty additional clerks in the Signal Office, four clerks in the Ordnance Office, and two clerks in the Bureau of Military Justice. An increase of compensation is again recommended for the chief clerk, disbursing clerk, chiefs of divisions, and stenographer in the office of the Secretary, and it is thought eminently just that these officers should receive the moderate compensation requested for the responsible and arduous duties performed by them. The two additional clerks and three laborers for the office of the Secretary of War are required for the stationary division, the division of miscellaneous supplies, and the library. A large reduction has been made in purchasing the stationery and supplies required for this office and the bureaus of the Department by making contracts with the lowest bidder upon each article. The labor necessarily involved under this system in receiving, accounting for, and delivering the supplies is great, and the Department has been inconvenienced in providing for the prompt transaction of the business. The distribution of the official records of the rebellion, devolved upon the Secretary's office by the act of August 7, 1882 (22 Statutes, 320), has also greatly increased the labor of the office, particularly of the librarian, who has been charged with the work, and an additional laborer is required therefor. During the past year he has received 176,000 volumes of these records, and has mailed to separate addresses over 30,000 volumes, keeping a record of each volume so sent.

The estimates for the support of the Army and Military Academy are based upon the actual requirements of the service, the several items of increase being explained by notes accompanying them.

The appropriations for the support of the Signal Service for the fiscal year ending June 30, 1883, have been found insufficient, and estimates will be submitted to supply the deficiencies. Some difficulty was experienced in carrying out the provisions of the act of August 7, 1882 (22 Statutes, 319), which limited the expenditures to $300,000 from appropriations for support of the Army, in addition to the specific appropriations for that service. Thirty-eight days of the fiscal year had already expired, and, although the best efforts of the Department were exercised to keep the expenditures within the limit of the appropriations, its endeavors were not completely successful.

THE ARMY.

The report of the General of the Army has a special interest in being the last annual report that General Sherman will make. At his own request he has been relieved from the command of the Army, preparatory to his retirement from active service under the act of 1882. He has therefore thought it best to refrain from making any new

recommendations in his report, leaving that duty to his successor in the command of the Army, Lieutenant-General Sheridan. He, however, calls attention to and renews a former recommendation that a new organization be adopted for the regiments of infantry so that each shall be composed of twelve companies, making three battalions of four companies each, each company having one hundred men; and that in time of peace two of these battalions shall be maintained on a perfect war footing, while the other battalion may be a mere skeleton, with its complement of officers, and be used as a nucleus for recruits. The great advantage of this change, as suggested by the General, is the important one of being able to put a large and effective force in the field upon short notice, by merely enlisting a sufficient number of additional private soldiers, the officers and organization being always ready to receive them.

During the past year an additional company in each of the regiments of artillery has been mounted and equipped as a light battery, so that there are now in service ten light batteries, stationed in different parts of the United States.

The history of the Army during the past year has been one of almost unbroken quiet, during which the troops have been engaged in no more active duties than those of guarding the Indian reservations, and in keeping themselves prepared for any service upon which they might be called. The only exception to this record occurred in Arizona. In March last a small party of Indians made a raid from Mexico, and, after killing nine persons, escaped back to the difficult country from which they had come. Brigadier General Crook made a vigorous pursuit, going many miles into Mexico, and, after pentrating into an almost inaccessible part of the Sierra Madre Mountains, had a fight with the Indians, and returned with a large number of prisoners, among whom were fifty-two male Indians. As for some time past the only Indian outbreaks have been in Arizona, special attention has been directed to an endeavor to secure for that region of the country the same quiet which exists elsewhere. After careful consideration of the difficulties involved, an arrangement has been made between the Interior Department and the War Department, under which the police control of all the Indians on the San Carlos Reservation has been given to General Crook, and he has been charged with the duty of keeping the peace on the reservation and preventing the Indians from leaving it. General Sherman expresses the belief that if General Crook is permitted to manage the Apaches in his own way, all wars will cease in Arizona, and that with them will disappear the complicated Indian question which has tested the patience and courage of our people ever since the first settlement by whites on this continent.

The schools for officers (one at Fortress Monroe for higher instruction in artillery, and one at Fort Leavenworth for more perfect instruction in matters relating to the cavalry and infantry arms of the service)

are reported by the General as being in excellent condition, and as well managed and fulfilling their purpose; and I concur with him in recommending for them support and encouragement.

The number of desertions from the Army in the past year was nearly 3,600; only a few less than the extraordinary number of the year before. The most earnest efforts are being made to ascertain, and, so far as possible, do away with the causes of desertion. I beg leave to renew the recommendation made last year, that a partial remedy may be found by increasing the pay to what it was in 1865, that is, $16 per month for a private soldier and a proportionate amount for non-commissioned officers.

MILITARY ACADEMY.

The Superintendent reports that the general tone and discipline of the Corps of Cadets are very good. The total number of cadets present September 1 last was 311.

ADJUTANT-GENERAL'S DEPARTMENT.

The full list of officers authorized by law to act as instructors in tactics and military science at colleges throughout the country has been so employed during the past year. The reports show a continuing interest taken by the college authorities and students in this work.

The Adjutant-General recommends that Congress be asked to authorize the retirement of enlisted men who have served faithfully for not less than thirty-five years with full pay of the grade held by them at the time of their retirement. It is true that the Soldiers' Home near Washington makes provision for most of the cases, but there are others for whom it cannot properly provide. The Adjutant-General, in his report, mentions particularly two cases of old soldiers of forty years' service who are incapacitated for further duty, but who cannot avail themselves of the benefits of the shelter of the Soldiers' Home without leaving their wives and children. I concur in his recommendation that some proper provision be made for such cases.

I beg leave to renew my recommendation, made last year, that the laws should be amended so as to permit officers at remote posts to employ enlisted men, upon the approval of the proper department commander, for domestic purposes, where servants cannot be obtained.

I also renew my recommendation that there be restored the *per diem* allowance to officers serving away from their stations on courts-martial and military boards. Not infrequently an officer is required to perform such duty under circumstances of considerable hardship in the extraordinary expenses incurred by him.

The Adjutant-General recommends that the law in relation to the settlement by enlisted men of their clothing account be so amended as

to require a bimonthly settlement. The reasons given by him for this suggestion in his report show clearly that such a change would be greatly in the interest of economy to the Government, and would at the same time be beneficial to the soldier.

The important records of the Adjutant-General, occupying no less than six rented buildings, have since the last annual report been transferred to the new State, War, and Navy Department Building, where they are now safe from destruction by fire.

A gratifying progress in responding to requests for information in pension and other claims is reported.

The number of unanswered calls on hand October 1, 1882, was	45,822
There were received during the year thereafter	231,360
Finished during the year	255,923
Remaining on hand October 1, 1883	21,259

THE SOLDIERS' HOME.

The Board of three Commissioners was increased by act of Congress approved March 3, 1883, to seven, including the General commanding the Army, who is the president of the Board. The same act prescribed new regulations for the Home, the most important being those affecting the management and control of the funds and the pensions of inmates. These regulations appear to be satisfactory, and have been strictly observed.

No additions have been made to the realty of the Home and no important improvements made during the year, except the completion of a library building and rebuilding a barn destroyed by fire early in July. The expense upon both buildings will be about $5,900.

The property of the Home at Harrodsburg, Ky., was offered for sale in April, under authority of an act of Congress approved December 23, 1882, but a sufficient bid could not be obtained.

The Commissioners renew a former request that a small piece of land in the District of Columbia belonging to the Home, and now used for the purposes of a national cemetery, may be purchased by the General Government for the same purpose permanently. An appropriation of $15,000, to be paid in to the Home fund as the price of the ground, is recommended.

The expense for care and treatment of inmates who become insane is paid by the Home to the Government Hospital for the Insane. The Commissioners ask for the Soldiers' Home in the District of Columbia the same privilege of sending insane patients to the Hospital as was granted by act approved August 7, 1882, for the National Home for Volunteers. Appropriate legislation for this purpose is recommended.

The total receipts by the treasurer of the Home during the year were $143,035.50, and the cost of maintaining the Home $139,557.63.

GOVERNMENT HOSPITAL FOR THE INSANE.

The following is a statement of the number of persons committed to the Government Hospital for the Insane, under the orders of the Secretary of War, from October 1, 1882, to October 1, 1883:

Officers of the U. S. Army	1
Officers of the U. S. Army (retired)	1
Enlisted men of the U. S. Army	31
Late soldiers of the U. S. Army	3
Late volunteer soldiers	1
Inmates of the United States Soldiers' Home	4
Military prisoners	4
Employés of the Quartermaster's Department	1
Total	46

MILITARY PRISON.

There is no change worthy of note in the conduct of affairs at the Military Prison at Fort Leavenworth. The Board of Commissioners has made its semi-annual inspections, on each occasion carefully examining into the condition of the prison and inquiring into prisoners' complaints. The number of prisoners on June 30, 1882, was 453; and there were in the prison on June 30, 1883, 467. The prison work has continued as usual, with the result of 65,000 pairs of boots and shoes, 30,000 brooms, 4,000 barrack-chairs, and a large amount of harness and other articles useful in the Army.

I renew my recommendation that the officer in charge of the prison shall be given the local rank and the pay and allowances of a colonel, as a just recognition of the importance and character of the service he renders.

BUREAU OF MILITARY JUSTICE.

The Judge-Advocate-General reports the number of records of trials by general courts-martial received, revised, and recorded during the year to be 1,985, being an increase of 131 over the previous year; and the number of records of cases tried before garrison and regimental courts-martial received and filed in judge-advocates' offices at department headquarters during the same period, so far as reported, was 8,404. The number of reports and opinions rendered upon courts-martial and miscellaneous questions of law was 1,487, being an increase of 596 over last year. The number of transcripts of proceedings of courts-martial furnished was 511, and the copies of records of courts-martial furnished in conformity with the 114th Article of War numbered 119.

QUARTERMASTER'S DEPARTMENT.

At the beginning of the last fiscal year there remained in the Treasury to the credit of the Quartermaster's Department $1,182,239.65. The

sum appropriated was $11,375,000, and the balance undrawn at the close of the year $1,295,279.01.

The Quartermaster-General recommends that a reasonable compensation in addition to their pay be allowed to many officers of the line who are required, from time to time, to perform duty as acting assistant quartermasters, and charged with the disbursements of public money and the care and issue of supplies. This should be the same as that allowed to officers performing similar duties in the Subsistence Department. The enlistment of sergeants to assist these officers in their duties is strongly recommended, and he suggests the enlistment of persons who shall be qualified for this work, men who are clerks of experience in the Quartermaster's Department, and that they be designated quartermaster's sergeants; that at every permanent post garrisoned by not less than two companies a quartermaster's sergeant shall be selected by examination from such of the enlisted men of the line of the Army as are competent clerks, and appointed by the Secretary of War, at his discretion, on the recommendation of the Quartermaster-General; also, that the enlisted clerks allowed each post quartermaster shall receive thirty-five cents extra-duty pay *per diem* where thus employed.

There have been authorized 90 new buildings, at an estimated cost of $147,178. Repairs to public buildings have cost, it is estimated, $452,559. Of this sum $4,344 were expended in erecting and fitting up buildings for school and religious purposes. The water supply and system of sewerage have been improved at 21 military posts, costing $51,852. Hospital buildings have cost for construction and repair $74,968.

Preliminary steps have been taken for the erection of the Hot Springs Hospital, for which Congress, by act of June 30, 1882, appropriated $100,000. A contract has been made for the work at $85,335, the lowest offer.

In regard to quartering troops, the necessity for so many very small and scattered military posts is fast diminishing, inasmuch as the Indians are collected on permanent reservations; at the same time the necessity for larger permanent posts near Indian reservations and frontiers is increasing. For these reasons it will add greatly to the economy of maintenance of troops and to their efficiency if they can be assembled at important points in larger and more permanent garrisons. To do this will require special appropriations from Congress; for that reason several important special estimates have been presented, to which attention is respectfully invited.

The important recruiting depot and training school for recruits at David's Island, near New York City, needs an immediate appropriation to replace old, dilapidated, and unsuitable buildings; the sum of $125,000 is needed to begin the work. This work is well known to be a work of pressing national necessity.

It has been found that the buildings at Jefferson Barracks, on the Mississippi River, near Saint Louis, which are old and have been long used as barracks, have become extremely unhealthy for the recruits collected there and trained for the Army. If that post is to continue in use for that purpose, it is believed that new buildings are required to be constructed upon ground hitherto unused, which should be first thoroughly underdrained and then built upon. It will require $100,000 to begin the work of rebuilding this post and bringing it into a proper sanitary condition for its continued use as a recruiting depot and training school for young recruits for the Army.

Transportation was provided by rail, water, wagon, and stage for 65,166 persons, 6,279 animals, and 118,935 tons of material, costing $2,149,051.49—$414,908.84 for transportation of persons, $901,663.23 for live stock and freight, and $384,322.35 on accounts not strictly chargeable either to passengers or freight, leaving $448,157.07 outstanding accounts not settled at the close of the year.

The expenses of military transportation not paid out of the regular appropriations comprise that provided over bonded Pacific railroads, in value $845,144.46, which is credited at the Treasury Department on their debts, and that provided over land-grant roads, to which fifty per cent. of tariff rates is paid under the act of Congress of June 30, 1882, making special appropriation of $125,000 for that purpose. The operations of this service are set forth in accompanying statements.

Special attention is invited to the subject of the railroads indebted to the United States for material sold them in 1865 and 1866. Of the fifty railroads which became indebted to the Government for such purchases, forty-six have settled their debts. The four which the books of the office show as still indebted have made no cash payment for several years, and at present there is no probability that a settlement will ever be reached, and it is suggested that the whole matter be transferred to some other branch of the Government service.

There were purchased 965 cavalry and artillery horses at an average cost of $156.59, and 195 mules at an average cost of $170.02, and 53 draught horses at an average cost of $220.37.

The sales of animals were 937 cavalry and artillery horses, 123 draught horses, and 553 mules, realizing $87,891.32, which is deposited in the Treasury, excepting a small sum received from sales to officers.

There were on hand on June 30, 1883, 16,400 animals, of which 7,797 were cavalry and artillery horses; the remainder, 8,603, were quartermaster's draught and pack animals, as follows: 628 horses, 7,959 mules, and 25 oxen. I had at that date been for some time examining into the necessity of keeping so many draught and pack animals in service, and having become satisfied that in view of the decreasing demand for the service of troops in active field operations a considerable reduction could properly be made, a general order for that purpose was, by my direction, issued on the 1st of August, 1883. The consequent returns

are not yet complete, but it is believed that a reduction of nearly all of the draught horses and of about 2,000 of the mules will result from the execution of this order. This reduction will greatly affect future expenses in keeping and replacing this number of animals, and in the cost of civilian employés caring for and using them.

There were issued during the year 112,596 cords of wood and 49,818 tons of coal.

Inconvenience and sometimes hardship results to officers of the Army serving west of the Mississippi River from the operation of the law of June 8, 1878, which compels the officers to purchase fuel for their own use, and the Quartermaster-General therefore recommends that this subject be brought to the attention of Congress, and that the allowance, when on hand at posts, be supplied as was done before the passage of the act referred to.

Forage issues were as follows: 842,298 bushels of oats, 420,706 bushels of corn, 154,367 bushels of barley, 119,635 bushels of bran, 47,028 tons of hay, 2,945 tons of straw, and 83 tons of fodder.

Illuminating supplies to the value of $53.50, have been supplied to the Army during the year.

Claims under the act of July 4, 1864, awaiting action at the beginning of the year and received during the year aggregated 16,896, amounting to $7,771,174.58; and 71 claims, amounting to $44,388.91, which had been presented to boards and commissions prior to January 1, 1880, were called up during the year. The number of claims on which action was taken was 4,993, amounting to $3,492,208.21; and there remained on hand July 1, 1883, 11,974 claims, amounting to $4,323,355.28. In addition to these there were 138 claims of a miscellaneous character, amounting to $19,259.64; and 216 of that character, amounting to $39,769.28, received action and were reported to the accounting officers of the Treasury Department. Special action was taken in the case of Julia H. Nutt, widow and administratrix of Haller Nutt, as required by the act of Congress approved August 7, 1882.

It is believed that the Army has been well clothed and provided with sufficient equipage, but the working stock to meet emergencies is not sufficient. Improvements in the standard articles are made gradually, from time to time, as the necessities of the service seem to require them.

The Quartermaster-General calls attention to the loan of tents to the sufferers by reason of the overflow of the Mississippi River, by which $4,359.89 worth of property has been lost to the United States by reason of failure to return it. The hospital tents have been much used in this and other ways, under special acts of Congress, and are worn out and the stock exhausted.

The national homes for disabled volunteers have been supplied with much old pattern clothing.

The whole number of national cemeteries now under the care of the Quartermaster's Department is 83, containing 321,369 interments.

There has been some delay in prosecuting the work of providing headstones for the soldiers' graves in private, village, and city cemeteries, but the work will be continued until brought to a satisfactory close. The work on the roadways to the Chattanooga, Mound City, and New Albany Cemeteries, under special appropriations, will probably be finished before the coming winter. The extension of the grounds of the Cypress Hills National Cemetery has heretofore been the subject of various reports, and has had favorable consideration in Congress, and the Quartermaster-General recommends that the attention of Congress be again invited to the subject. The Soldiers' Home Cemetery, near this city, has been enlarged by transfer of additional land belonging to the Soldiers' Home, and an appropriation of $15,000 to pay for the land has been asked therefor. The ownership of the Arlington estate being beyond a doubt now in the United States, the Quartermaster-General earnestly recommends that the beautiful grounds of the cemetery be connected by a bridge across the Potomac River with the projected park on the river flats.

SUBSISTENCE DEPARTMENT.

The report of the Commissary-General of Subsistence presents a full summary of the financial affairs of the Subsistence Department for the last fiscal year.

The completion of another transcontinental line of railroad, and the extension of railroads in the Territories, enable the Subsistence Department to furnish the remote posts with fresh stores more frequently, with less cost to the Government and with less loss from deterioration than heretofore.

The Commissary-General renews previous recommendations, looking to improvement in the cooking of the food supplied by the Subsistence Department for the Army, and suggests that if provision were made by law for the special enlistment of men as cooks and bakers, the health, comfort, and efficiency of the troops would be materially benefited thereby.

It is probable that, during the current fiscal year, all war claims, originally filed in the office of the Commissary-General of Subsistence, under the act of July 4, 1864, will be examined and passed upon as required by that act.

MEDICAL DEPARTMENT.

The total number of deaths from all causes reported from the Army for the fiscal year ending June 30, 1883, is 162 from disease, and 80 from wounds, injuries, and accidents. The casualties from actual warfare during the last fiscal year were few, only two reports of this nature having been received, involving the death of one soldier and the wounding of nine others.

The total number of official demands upon the Surgeon-General dur-

ing the fiscal year for information as to the cause of death in the case of deceased soldiers and the hospital record of invalids was 119,580, being 57,950 in excess of similar applications during the previous year, and an increase of 89,576 cases over the yearly average of demands for the decade preceding. In addition to this large number there remained unanswered June 30, 1882, 21,959 applications, making in all 141,539 cases to be disposed of within as short a period of time as practicable.

As the result of the labors of the year, replies have been furnished to the proper authorities in 109,007 cases, leaving 32,532 searches and replies yet to be made.

The cost of the medical and hospital supplies actually issued during the last fiscal year was $180,139.73.

The act making appropriations for the support of the Army for the fiscal year ending June 30, 1884, approved March 3, 1883, provides—

That civilian employés of the Army stationed at military posts may, under regulations to be made by the Secretary of War, purchase necessary medical supplies, prescribed by a medical officer of the Army, at cost, with ten per centum added.

Proceeds of sales under this act must, under section 3618 of the Revised Statutes, be covered into the Treasury. It is very desirable that the proceeds of sales of medical supplies to civilian employés should, if possible, be carried to the current appropriation for the Medical Department of the Army, and the amount become available for replacing the articles sold. This may have been the intention of the framers of this act, and such Congressional legislation is requested as will permit this course to be taken, and which may be accomplished by excepting "sales of medical supplies to civilian employés of the Army" from the provisions of section 3618 of the Revised Statutes, as is the case with "the sale of commissary stores to the officers and enlisted men of the Army."

In carrying out the laws for furnishing trusses some cases of hardship are found. Persons who held commissions as officers and all persons who were disabled previous to the war for the suppression of the rebellion are absolutely, and those disabled subsequently to this war are practically, excluded from the benefits of these laws, although these persons are pensioned on account of hernia.

It is desirable that the issue of trusses shall correspond to the issue of artificial limbs, as was probably the intention of Congress; that is, that a truss shall be furnished to every one who is ruptured in the line of his duty while serving in the Army or Navy.

The third surgical volume, History of the War, has been completed. It presents a volume containing 986 quarto pages, devoted to matters relating to the surgery of the lower extremities, to *materia chirurgica*, to transportation of wounded by land and water, to the work performed during the war by the medical staff and the ambulance system, and a subject-matter index of all the three surgical volumes.

The additions to the library during the past year include 3,912 vol-

umes and about 5,000 pamphlets, making the total number in the collection about 60,900 volumes and 68,700 pamphlets.

The printing of volume IV of the Index Catalogue has been completed and the addition distributed. The manuscript of volume V is in an advanced state of preparation, and the first part of it is now going to press.

The use of the library by the medical profession of the country continues to steadily increase. It is believed that this library has now become of such importance and utility and is so widely consulted that it should have the means of placing on its shelves as soon as published every new medical work, great or small, in all languages. To do this, and to supply books required to make its files complete in those subjects with regard to which there is the greatest demand for information, will require an annual appropriation of $10,000, and estimates for this amount have been submitted.

The attention of Congress is again called to the great importance to the Army, to the medical profession, and to the nation of providing a suitable fire-proof building for the safe deposit of those valuable collections, the destruction of which would be an irreparable loss.

The Surgeon-General states that, by contract made with Providence Hospital, Washington, D. C., under the act of Congress approved March 3, 1883, appropriating $15,000 for "the support and medical treatment of 75 transient paupers, medical and surgical patients," there have been granted during the fiscal year ending June 30, 1883, 558 permits for the admission to this institution of patients of this class—an average of 46.5 patients per month. In addition to this number it has been found possible, within the limits of said appropriation, to care for a monthly average of 84.75 patients of the same class, who are bed-ridden, infirm, and helpless, who have gradually accumulated in years past, and who, but for the favorable terms of the contract, would be thrown upon the charity of the public.

Since the date of last report six medical officers of the Army on the active list and three on the retired list have died, and one assistant surgeon has resigned; fourteen vacancies in the grade of assistant surgeon exist October 1, 1883, in the Medical Department of the Army. The names of thirteen approved candidates found qualified by an Army medical examining board for appointment of assistant surgeon will be submitted to the Senate when Congress assembles in December next.

PAY DEPARTMENT.

The report of the Paymaster-General shows that his department during the past year has properly accounted for $15,490,310.54. He urgently recommends the repeal of that part of the act of April 20, 1874, which provides that no officer detailed for the purpose of inspecting the accounts of the disbursing officers of the Army shall be in any way

connected with the department making the disbursement. It is the opinion of the Paymaster-General that this proviso prevents the use for purposes of inspection of officers who, from their intimate acquaintance with the character of the accounts to be inspected, are best qualified to detect any irregularities.

The Paymaster-General again recommends the repeal of the law which forbids payment of mileage to officers for so much of their travel as is over land-grant roads. I concur with him in this recommendation. The provision in question applies only to officers of the Army. Mileage is given to an officer not only to pay the mere cost of transportation, by rail or otherwise, but to cover that expense and his other necessary traveling expenses. Other traveling expenses are just as much over land-grant roads as over other roads; and it is, therefore, recommended that the provision be either repealed, or that over land-grant roads transportation be given, and in addition a reduced rate of mileage to cover incidental expenses.

Attention is also invited to the need of legislation on the subject of paymasters' bonds. A paymaster is required to give a new bond at least every four years; but it is understood that the accounting officers of the Treasury hold that each bond covers all the transactions of an officer under his current commission; and it is represented that for this reason officers experience difficulty in obtaining sureties upon their bonds. I concur with the Paymaster-General in his opinion that the liability of a surety should have some definite limit, and that the remedy which has been enacted in the matter of bonds of collectors of internal revenue and of postmasters should be extended to paymasters. In this connection, it has been brought to my attention that paymasters and other disbursing officers of the Army who are by law required to give large bonds for the faithful discharge of their duties, and to renew such bonds at stated periods, meet with peculiar difficulties in procuring such bonds. Ordinarily, an officer of the Government who is required to give a bond performs his duty in the neighborhood where he is well known, and where it is not difficult for him to procure proper sureties. A disbursing officer of the Army is permanently separated from his home, and in the course of his official life enters upon his duties at many stations where he is an entire stranger to all but his brother officers. The difficulty in procuring satisfactory sureties upon official bonds, and indeed the difficulty of procuring them at all, under such circumstances, is apparent. It would be of great advantage to such officers if they were permitted by law to furnish as security the obligation of some approved guaranty company organized for the purpose of indemnifying employers in this manner. At a small cost to themselves, officers would be saved much repeated embarrassment, and I confidently believe that the security to the Government would be much increased. Doubt is entertained whether, under existing laws, the Secretary of War is authorized to accept as surety any such com-

pany, and I have therefore declined to do so. I recommend, however, that the existing laws on this subject be so amended as to authorize the head of a Department to accept corporate as well as individual sureties upon official bonds.

ENGINEER BUREAU.

Attention is specially invited to that portion of the report of the Chief of Engineers which refers to the defenses of our sea-coast and lake frontier. The views of the Engineer Department as to the necessary measures to secure the harbors of the United States from maritime attack have been clearly set forth in former annual reports, especially those for the years 1880 and 1881. While our defense for many years must depend upon the completion of barbette batteries designed for modern guns and upon our system of torpedoes, the use of armor has not been overlooked, and plans have been prepared for the application of the turret system to some of our most important harbors. Our sea-coast, with its great cities and important harbors, is defenseless to-day against the attack of a modern iron-clad, and it is humiliating even to imagine the mortification, loss of life, property, and prestige to which we would be subjected should war come suddenly upon us, as, the history of nations shows, may happen at any time.

For many years no appropriations have been made for continuing the construction of our forts; and the barbette batteries, designed for the country's defense, are incomplete and rapidly going to ruin. It appears to be not only a matter of prudence but of absolute necessity that these works, so long delayed, shall at once be commenced and pushed to a speedy completion.

Attention is invited to the necessity for electrical rooms and cable galleries for the most important of our sea-coast works. However well developed our torpedo system may be, it will be comparatively useless so long as our instruments for firing submarine mines and our connecting cables are unprotected from the enemy's artillery. There should certainly be no further delay in constructing these comparatively inexpensive, but absolutely necessary, adjuncts to the system of torpedo defense.

The balance in the Treasury July 1, 1882, to the credit of appropriations for improving harbors and rivers was $4,738,263.58. The appropriations by the acts of June 19, 1882, August 2, 1882, and March 3, 1883, were $18,751,335, and the sum of $373,592.24 was drawn from indefinite appropriations for constructing jetties in the South Pass, Mississippi River; operating and care of various canals; and removing sunken vessels obstructing navigation. The drafts (including $500 transferred to the Interior Department) by requisition during the year were $13,841,541.27, leaving a balance of $10,021,649.55 in the Treasury July 1, 1883, and on the same date there was in the hands of officers or on deposit to their credit the additional sum of $2,362,254.10. Since

that date and up to November 1 there has been drawn from the Treasury $4,966,811.27.

For information relating to the improvements in progress I beg to refer to the report of the Chief of Engineers, which contains a detailed account of the steps taken to carry out the provisions of law and of the progress and condition of these works.

Respecting the surveys for the improvement of rivers and harbors called for by the act of August 2, 1882, the preliminary examinations have been completed, as required and provided for in that act, to ascertain and determine which of the localities enumerated are worthy of improvement, and in what cases the work is a public necessity. The reports of the results of these examinations in each case will be made the subject of a special communication to Congress. Such surveys as have been found to come within the provisions of the act have been undertaken and are in progress. The reports thereon will be submitted to Congress from time to time during the ensuing session as they are received.

Preliminary arrangements are still incomplete and in progress under the direction and supervision of Mr. M. J. Adams, the inventor, for making a practical test of a flume for increasing the depth of water of the Mississippi, for which the sum of $20,000 was provided by act of March 3, 1879, and a further sum of $8,000 by act of August 2, 1882.

A report of the progress made between October 10, 1881, and December 1, 1882, by the Mississippi River Commission in carrying out the work intrusted to it was transmitted to Congress December 29, 1882. The subsequent progress of that important work will be made the subject of a special communication to Congress at an early period of the ensuing session.

The final report of the survey of the northern and northwestern lakes has been printed. The results of this survey are embodied in sixty-seven engraved charts, which are furnished under proper regulations to all vessels navigating the lakes.

Office work has been continued in completing the maps and reports connected with the survey of territory of the United States west of the 100th meridian. There are thirteen atlas sheets now ready for publication. It is expected that the office work connected with this survey will be completed by December 31. The small appropriation asked for the next fiscal year for surveys required for military purposes, and for the publication of maps for use of the War Department, is earnestly recommended.

Improvement of the South Pass of the Mississippi River.

The last annual report of this Department brought the history of this work to September 9, 1882. During the four quarters ending September 9, 1883, there was no failure of maintenance of the channel. From

September 10, 1882, to September 9, 1883, both dates inclusive, four quarterly payments for maintenance, amounting to $100,000, and two semi-annual payments of interest on the $1,000,000 retained, amounting to $50,000, were made, the total expenditure for the improvement to the latter date being $4,850,000.

Attention is called to the failure of any provision for the fiscal year ending June 30, 1884, to meet the cost of the examinations and surveys required by law to ascertain the depths of water and widths of channels maintained at the South Pass. The amount available for this purpose June 30, 1883, was $6,048, barely sufficient to continue these examinations and surveys to December 31, 1883.

ORDNANCE DEPARTMENT.

There were manufactured at the National Armory at Springfield, Mass., during the year ending June 30, 1883, 33,621 small-arms.

The three systems of magazine guns mentioned in my last annual report as having been recommended for trial are still in process of manufacture. It is believed that a sufficient number of each kind for trial in the field will be ready early next spring.

Great attention has been given by the Ordnance Bureau to carry into effect the appropriation made in the act approved March 3, 1883, for making, converting, and testing rifled cannon. A number of contracts have been made, which are in process of execution. It had first to be considered whether or not gun steel in suitable masses and of the requisite quality could be procured in this country. In order to receive all possible information on this point, a very full circular letter, of which a copy is given in the report of the Chief of Ordnance, was sent to the principal steel works in the United States. The replies received showed that the plant or the experience in this country cannot as yet produce the steel forgings for tubes and jackets for so large a gun as one having an 8-inch caliber. Those required for such guns and for guns of larger caliber have, therefore, been contracted for in England. Smaller steel forgings have been undertaken in Philadelphia, and the tests thus far made of them show that they are fully equal in quality to the best European manufactures.

It is not possible to make a satisfactory abridgment of the very interesting information given by the Chief of Ordnance in his report respecting the construction of the various kinds of guns now going on, and for information respecting them reference is made to his report.

Under the provisions of section 1 of the act making appropriations for the naval service for the year ending June 30, 1884, a board, composed of officers of the Army and Navy, was, on the 2d of April, 1883, constituted by the President, to examine and report which of the navy-yards or arsenals owned by the Government has the best location and is best adapted for the establishment of a Government

foundry, or what other method, if any, should be adopted for the manufacture of heavy ordnance adapted to modern warfare. This board first visited the principal iron and steel works in this country, and then went abroad to pursue its investigations among the great steel works and gun factories of Europe. It has recently returned, but its report has not yet been made. It is hoped that it will be able to submit to Congress such a strong and full report, and make such definite recommendations, that Congress will be able to take prompt action towards providing for the great want of the country in suitable facilities and plant for the manufacture of heavy ordnance.

REPORT OF THE CHIEF SIGNAL OFFICER.

Full details of the work of the Weather Bureau will be found in the report of the Chief Signal Officer, the character of which is similar to that explained in previous annual reports.

The Chief Signal Officer, however, calls attention to the insufficiency of the appropriations made last year for this work, arising mainly from the specific appropriations made in the last act being less in amount than the customary expenditures of the service, but in part out of what was no doubt an inadvertent omission to appropriate, in the detailed appropriation bill enacted especially for this service, for certain items of expense necessary if this service is to be maintained. Undoubtedly omissions of this character should be corrected if the service is to be supported; but I trust that the temporary prohibitory legislation enacted at the last session of Congress, preventing the Secretary of War from making unlimited drafts, at his discretion, upon military appropriations to carry out the provisions of sections 221 and 222 of the Revised Statutes, which have no relation to military matters, will be made permanent at the approaching session of Congress; and that the making of separate appropriations for the Signal Service will be continued, so that the amount expended for it will not be upon the sole responsibility of the Secretary of War.

The report of the Chief Signal Officer shows, somewhat in detail, the measures taken in pursuance of a provision in the sundry civil act of 1883 to bring back to this country the two Arctic expeditions, one at Lady Franklin Bay, and the other at Point Barrow. The report of the Chief Signal Officer being for the year ending June 30, 1883, does not include the subsequent history of the relief expeditions. The Point Barrow party has safely returned.

On June 29th last, a well-equipped relief party sailed on a hired steam-sealer, the Proteus, from Saint John's, Newfoundland, with instructions to reach Lady Franklin Bay if possible, and to bring back Lieutenant Greely and his party. Arrangements were here made with the Navy Department to have the United States steamer Yantic accompany the sealer as far north as it was safe for the Yantic to go, so that it might render any assistance in what it was not improb-

able would be a perilous voyage. It was contemplated that, in case the Proteus should not be able to reach Lady Franklin Bay, a well-provided relief station was to be established at a point near the entrance to Smith's Sound, from which, as a base, Lieutenant Greely was to be sought for, with the expectation that both parties would easily be relieved and brought home in the year 1884.

The Proteus, with the relief party and supplies on board, parted from the Yantic at the beginning of the voyage, and penetrated a short distance into Smith's Sound; was there caught in the ice and destroyed, with nearly all its stores. The party on board made its way southward; was finally taken up by the steamer Yantic and brought home, arriving at so late a season that, after careful consideration, it was determined that there was little if any chance of success for another expedition sent north this season, and that the probability of disaster to such an expedition was very great. A copy of a memorandum of the views of the Secretary of the Navy and myself made at the time is appended. The general conduct of the relief expedition on the Proteus is being investigated by an Army court of inquiry now in session in the city of Washington.

It will be necessary that early provision should be made to fit out another expedition for the relief of Lieutenant Greely and his party. Their exact situation and condition is only a matter of conjecture. They have had with them at Lady Franklin Bay a supply of food, clothing, and other necessaries entirely sufficient to last them until next summer; and there would be no reasonable apprehension for their safety if it were known that they had remained and were now at Lady Franklin Bay. It is possible, however, that inasmuch as the relief expedition of the year 1882 did not succeed in connecting with Lieutenant Greely, he, in pursuance of prearranged plans, late in the summer of this year left Lady Franklin Bay to come southward to the entrance of Smith's Sound, and that, relying upon finding there an abundant supply of the necessaries of life, he neglected to burden himself in the southward journey with a greater quantity of provisions and clothing than would be necessary to support his party on the journey. Even in this case his condition would be by no means desperate, for at this point and further north there are supplies, and if they should prove not sufficient to support him and his party until a vessel can reach him in 1884, it is thought that it would not be impossible for him to retrace his steps and reach the supplies left at Lady Franklin Bay, although such a journey would be disheartening and very difficult, even if his party should be in good condition.

RECORDS OF THE WAR OF THE REBELLION.

The general examination of the records, both Union and Confederate, has been completed. Any further examination that may be necessary will be for such missing links as may be developed in the compilation.

The formal reports of military operations made by the Union commanders have all been copied, and those made by the Confederate commanders will be copied by the end of the next fiscal year.

Nine volumes in all have now been published; seven more are in the hands of the printer nearly completed, and the manuscript of five additional volumes is arranged for printing.

MONUMENT AT YORKTOWN.

The commission of artists, consisting of Messrs. Hunt, Ward, and Van Brunt, who furnished the design which was accepted by the joint congressional committee, having completed its details and prepared specifications, proposals were called for by advertisement of November 27, 1882. The contract was awarded in February, 1883, to the Hallowell Granite Company, of Hallowell, Me. The quarrying of the stone has been in progress, as also the preparation of the models for the sculptor's work. The monument is to be completed by October, 1884, the execution of the contract being under the supervision of Lieut. Col. W. P. Craighill, Corps of Engineers.

BUILDING FOR STATE, WAR, AND NAVY DEPARTMENTS.

The north wing of this building was completed in December, 1882, and soon after occupied by this Department. Work on the approaches has been commenced, and will probably be finished during the present season.

There now remain the west and center wings only to complete the building. As the first appropriation for these was not made until August, 1882, ground cannot be advantageously broken until the spring of 1884, when a sufficient quantity of cut granite will be accumulated. The whole sum of $500,000, included in the annual estimates of this Department, should be granted, in order that the work on these wings can go on rapidly and uninterruptedly.

The comparatively small portion of the building now occupied by this Department is entirely inadequate for its needs, and the security of the valuable public records still stored in scattered hired buildings requires that the new building should be completed without delay.

EDUCATION IN THE ARMY.

The officer in charge of education in the Army reports that progress has been made in systemizing and rendering more effective the post schools already established, and that there is a deeper interest in the subject than ever before. The average attendance was greater than in the year before. I again recommend legislation authorizing the enlistment of 150 competent instructors, with the rank and pay of commissary sergeants. The work cannot be done satisfactorily by the detail of enlisted men, as is now necessary. At three of the military posts the officers and enlisted men have themselves hired teachers, at a compensation of fifty dollars per month.

THE MILITIA.

The report of the Adjutant-General shows that in many of the States much attention is being given to the improvement of the militia. As stated in my last annual report, officers of the Army are sent, whenever requested by the proper State authorities, to be present at militia encampments to inspect the troops, and to give any assistance in making the encampments successful and profitable to those who take part in them, so far as is possible. Officers were, accordingly, sent during the last year to encampments in nine different States, and the reports of the inspecting officers, given in full by the Adjutant-General, are interesting and instructive.

I earnestly recommend that the attention of Congress be invited to the subject of giving substantial encouragement to the formation of volunteer militia organizations in every State, and in the District of Columbia, by liberal appropriations to supply the necessary arms, equipments, tents, ammunition, and other ordnance stores. With our small standing Army, our main dependence for public defense must be on our militia; and the wisdom of the comparatively small expenditures which would encourage their organization, and their efficiency in drill and discipline, seems apparent. In the last Congress a bill on this subject was reported from the Senate Committee on Military Affairs (S. 1596), by which it was contemplated that in lieu of the annual sum of $200,000 provided by the act of the 23d of April, 1808, the sum of $600,000 should be annually appropriated, the purposes for which it should be used being more extended than under the provisions of the old act. A careful consideration of this proposed act leads to the belief that its enactment would be a great public benefit, and I strongly recommend the passage of such a law.

I believe it to be especially the duty of Congress to make a new enactment respecting the organization of the Militia in the District of Columbia. The act now in force, in its essential parts, is nearly a century old, and is not adapted to the present situation of affairs. It is believed that, under appropriate legislation, an efficient and creditable organization of the Militia in the District of Columbia could be easily effected.

ROBERT T. LINCOLN,
Secretary of War.

MEMORANDUM.

The Secretaries of War and the Navy have decided that it is not practicable to send another expedition to the relief of Lieutenant Greely this year. They have consulted those persons of Arctic experience who are recognized as the best authorities, and who are near enough to

be reached, and have received letters from some who are more distant. These consultations lead to the conviction that little can be accomplished after October 20, when there are but few hours of daylight in that region. It is doubtful if any vessel could reach Upernavik before that date on account of the ice, the rapidly shortening days, and the increasing cold. The danger of wrecking a new relief party in its attempt to reach this place is far greater than should be incurred for the chance of rendering any aid to Greely. From Upernavik no aid could be given except by sledging, and this is regarded as totally impracticable. The short marches and the long halts, compelled by the darkness, would force the sledging parties to consume so much food while accomplishing brief daily journeys that they could afford no succor to Greely, and having no depots on the way to draw on they would soon be compelled to fall back to avoid starvation. Some have suggested sending a vessel to Cape York, but no one advises that it can be reached without imminent peril to the vessel and all on board; and from that point, if attained, the impossibility of sledging is again encountered. The distance from Littleton Island to Cape York is about 225 miles, and to Upernavik 550, and to Disco 800.

Lieutenant Greely's case is considered by no means hopeless. He has the advantage of daylight in which to move if he left his station, as ordered, no later than September 1st. The days which would be lost in outfitting a vessel and in the voyage to Greenland will be utilized by him. Arriving at Cape Sabine not far from September 15th, perhaps earlier, he will learn of Garlington's disaster, and determine on his plans for the winter. If he attempts to move south upon the Danish settlements, he has 740 rations at Cape Sabine, 240 more on an island in its vicinity west of Brevoort Island, and 240 at Littleton Island—sufficient without retrenchment for forty-eight days for his command. But he may choose to regain Lady Franklin Bay, over a distance of about 250 miles. There he had more than a year's supply of the best assorted food, including breadstuffs, canned meats, fruits, vegetables, chocolates, coffee, milk, preserves, sauces; and also lights, fuel, and shelter. For his journey northward he would have at Cape Sabine and on the island west of Brevoort some thirty-nine days' food at starting, and on his road depots at reasonable distances which he will not have emptied on his way down to Cape Sabine. Of these depots there were at Cape Hawks over two months' supplies, ten days' at Cape Collinsow, and ten at Carl Ritter Bay. From one to another of these he can travel comparatively light, sure to find plenty on his return to Lady Franklin Bay. He cannot fail to know that the most earnest efforts will be made to relieve him next year, and plans will at once be prepared to put on foot an expedition which shall meet all the wishes of the most anxious friends of the party.

SEPTEMBER 19, 1883.

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, showing the amount appropriated under each title of appropriation, the amount drawn by requisition upon the Treasury, and the balances subject to requisition July 1, 1883.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
SALARIES, CONTINGENT EXPENSES, AND POSTAGE.							
Salaries, office of Secretary of War	$126 93	$94,884 93		$95,011 86	$91,128 43	$126 93	$3,756 50
Contingent expenses, office Secretary of War		10,000 00		10,000 00	8,687 43		1,312 57
Salaries, office of Adjutant-General	766 03	538,536 16		539,302 19	507,332 47	766 03	31,203 69
Contingent expenses, office of Adjutant-General		34,000 00		34,000 00	32,322 23		1,677 77
Salaries, office of Inspector-General		2,520 00		2,520 00	2,520 00		
Salaries, office of Military Justice		7,218 63		7,218 63	7,150 00		68 63
Contingent expenses, office of Military Justice		1,500 00		1,500 00	1,500 00		
Salaries, Signal Office		41,684 38		41,684 38	41,668 07		16 31
Salaries, office of Quartermaster-General	46 90	219,275 21		219,322 11	219,250 84	46 90	24 37
Compensation and expenses agents, Quartermaster's Department		27,123 29		27,123 29	19,123 69		7,999 60
Contingent expenses, office of Quartermaster-General		7,435 00		7,435 00	7,435 00		
Salaries, office of Commissary-General	16 96	31,680 00		31,696 96	31,678 92	16 96	1 08
Contingent expenses, office of Commissary-General		5,500 00		5,500 00	5,500 00		
Salaries, office of Surgeon-General	848 82	484,847 67		485,696 49	468,907 90	848 82	15,939 77
Contingent expenses, office of Surgeon-General		31,300 00		31,300 00	31,300 00		
Salaries, office of Chief of Ordnance		20,380 00		20,380 00	20,324 62		55 38
Contingent expenses, office of Chief of Ordnance		1,500 00		1,500 00	1,500 00		
Salaries, office of Paymaster-General		58,586 58		58,586 58	58,581 72		4 86
Contingent expenses, office of Paymaster-General		2,500 00		2,500 00	2,500 00		
Salaries, office of Chief of Engineers	3 90	23,240 00		23,243 90	23,240 00	3 90	
Contingent expenses, office of Chief of Engineers		3,000 00		3,000 00	3,000 00		
Salaries, office of Publication of Records of the Rebellion		37,176 99		37,176 99	37,176 99		
Contingent expenses, office of Publication of Records of the Rebellion		5,603 36		5,603 36	5,603 36		
Salaries of civil employés, in lieu of general service or detailed enlisted men		225,900 82		225,900 82	217,300 00		8,600 82
Salaries, superintendent, &c., War Department building	15 00	22,275 07		22,290 07	20,984 50	15 00	1,290 57
Contingent expenses, War Department building		11,500 00		11,500 00	11,500 00		
Furniture, War Department building		50,000 00		50,000 00	40,000 00		10,000 00
Rent of building, office of Adjutant-General	200 00	7,000 00		7,200 00	3,000 00		4,200 00
Salary, superintendent building corner Pennsylvania avenue and Fifteenth street		250 00		250 00	250 00		
Rent of building corner Pennsylvania avenue and Fifteenth street		10,000 00		10,000 00	10,000 00		
Salary, superintendent of building occupied by Commissary-General		250 00		250 00	250 00		
Salary, superintendent of building on Tenth street		250 00		250 00	250 00		
Rent of buildings, office of Surgeon-General		8,700 00		8,700 00	8,319 57		380 43
Salaries, superintendent, &c., building on F street		5,170 00		5,170 00	5,170 00		
Contingent expenses, building on F street		3,500 00		3,500 00	3,500 00		
Rent of building on F street		4,500 00		4,500 00	4,500 00		
Salaries, superintendent, &c., building corner Seventeenth and F streets	218 81	5,788 08		6,006 89	5,788 08	218 81	
Contingent expenses building corner Seventeenth and F streets	90	5,520 00		5,520 90	5,520 00	90	

Postage, War Department	84,806 96	140,000 00	.....	194,806 96	186,082 24	6,768 04	49,422 67
Postage to postal union countries, War Department	.....	3,000 00	.....	3,000 00	2,000 00	.....	1,000 00
Salaries of employés, Public Buildings and Grounds under Chief Engineer	.....	.....	.....	.....	.....	.....	10
Contingent expenses, Public Buildings and Grounds under Chief Engineer	28 26	41,659 14	.....	41,682 40	41,659 04	28 26	.....
	.....	500 00	.....	500 00	500 00	.....	.....
Total salaries, contingent expenses, and postage	56,574 46	2,285,255 31	.....	2,291,829 77	2,146,005 10	8,859 55	136,965 12
MILITARY ESTABLISHMENT.							
Expenses of Commanding General's office	35	2,500 00	.....	2,500 35	2,500 00	35	.....
Expenses of recruiting	732 00	102,839 93	.....	103,571 93	99,918 51	536 51	3,116 91
Contingencies, Adjutant-General's Department	82 10	3,000 00	.....	3,082 10	2,716 73	82 10	283 27
Signal Service	.....	10,500 00	.....	10,500 00	10,412 35	87 65	.....
Pay, &c., of the Army	211,468 63	13,102,749 36	.....	13,314,217 99	12,301,753 76	65,458 56	947,005 67
Subsistence of the Army	10,792 78	2,226,550 19	.....	2,237,342 97	2,062,922 17	71,877 62	102,543 18
Regular supplies, Quartermaster's Department	470,581 98	3,485,322 49	.....	3,955,904 47	3,356,971 25	445,800 12	153,133 10
Incidental expenses, Quartermaster's Department	32,942 03	892,637 30	.....	925,579 33	834,297 30	18,100 78	73,181 25
Barracks and quarters	3,641 34	834,278 82	.....	837,920 16	834,197 92	865 64	2,856 60
Transportation of the Army and its supplies	91,453 82	5,356,785 16	.....	5,448,238 98	5,018,815 57	57,402 63	372,020 78
Fifty per centum of arrears of Army transportation due certain land-grant railroads	155,307 42	250,000 00	.....	405,307 42	296,379 38	13,839 83	95,088 21
Horses for cavalry and artillery	10,167 88	235,839 00	.....	246,006 88	220,031 91	9,216 53	16,758 44
Construction and repair of hospitals	1,322 68	75,000 00	.....	76,322 68	73,101 70	1,152 40	2,068 58
Clothing, camp, and garrison equipage	82,127 13	1,400,192 12	.....	1,482,319 25	1,252,346 71	71,261 34	158,711 20
Contingencies of the Army	13,300 00	42,608 91	.....	55,908 91	26,672 68	531 37	28,704 86
Medical and hospital department	5,069 04	201,683 16	.....	206,752 20	199,410 36	1,224 97	6,116 87
Medical Museum and library	.....	10,000 00	.....	10,000 00	10,000 00	.....	.....
Engineer depot at Willets Point	.....	10,000 00	.....	10,000 00	10,000 00	.....	.....
Ordnance, ordnance stores, and supplies	134 46	395,452 00	.....	395,586 46	394,799 78	151 81	634 87
Ordnance service	10 79	125,000 00	.....	125,010 79	112,326 98	11 58	12,672 23
Ordnance material (proceeds of sales)	440,154 84	88,253 83	.....	528,408 67	82,500 00	.....	445,908 67
Manufacture of arms at national armories	.....	350,000 00	.....	350,000 00	350,000 00	.....	.....
Manufacture or purchase of magazine guns	.....	50,000 00	.....	50,000 00	6,000 00	.....	44,000 00
Pay of Military Academy	82,787 69	212,832 50	.....	295,620 19	195,626 70	35,699 84	64,293 65
Current and ordinary expenses, Military Academy	.....	65,344 43	.....	65,344 43	62,135 00	3,209 43	.....
Miscellaneous items and incidental expenses, Military Academy	456 41	15,320 00	.....	15,776 41	15,139 39	456 41	180 61
Total military establishment	1,612,583 37	29,544,689 20	.....	31,157,222 57	27,830,976 15	796,967 47	2,529,278 95
PUBLIC WORKS.							
Benicia arsenal	50,000 00	59,400 00	.....	109,400 00	24,025 00	.....	85,375 00
Powder depot, Dover, N. J	.....	75,000 00	.....	75,000 00	75,000 00	.....	.....
Rock Island arsenal	50	386,000 00	.....	386,000 50	386,000 00	50	.....
Rock Island bridge	.....	9,250 00	.....	9,250 00	9,250 00	.....	.....
San Antonio arsenal	.....	21,455 00	.....	21,455 00	21,455 00	.....	.....
Springfield arsenal	.....	16,000 00	.....	16,000 00	16,000 00	.....	.....
Washington arsenal	15 35	.....	.....	15 35	.....	15 35	.....
Testing-machine	15 00	10,000 00	.....	10,015 00	6,764 46	2,628 78	621 76
Repairs of arsenals	05	40,000 00	.....	40,000 05	39,993 14	05	6 86
Total arsenals	50,030 90	617,105 00	.....	667,135 90	578,487 60	2,644 68	86,003 62

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
PUBLIC WORKS—Continued.							
Preservation and repair of fortifications	$9,560 13	$175,000 00		$184,560 13	$164,331 15	$297 44	$19,931 54
Contingencies of fortifications		158 51		158 51	156 61	1 90	
Fort Jackson, Mississippi River, Louisiana	2,527 50			2,527 50			2,527 50
Fort Saint Philip, Mississippi River, Louisiana	9 33			9 33			9 33
Fort at Lazaretto, Baltimore Harbor, Maryland	13,000 00			13,000 00			13,000 00
Fort Scammel, Portland Harbor, Maine	181 30			181 30			181 30
Fort Pulaski, Savannah River, Georgia			$34 43	34 43			34 43
Sea-wall at Governor's Island, New York Harbor		54,000 00		54,000 00	21,000 00		33,000 00
Torpedoes for harbor defenses		100,000 00		100,000 00	100,000 00		
Armament of fortifications	406,942 11	105,000 00		511,942 11	84,992 82	146,156 54	280,792 75
Powder and projectiles (proceeds of sales)	83,306 90	176 77		83,483 67	40,640 00		42,843 67
Examination of heavy ordnance and projectiles	14,634 45		535 22	15,169 67			15,169 67
Sea-coast batteries for instruction of militia		5,000 00		5,000 00	5,000 00		
Total	530,161 72	439,335 28	569 65	970,066 65	416,120 58	146,455 88	407,490 19
Deduct repayments					569 65		
Actual expenditures					415,550 93		
BUILDINGS AND GROUNDS IN AND AROUND WASHINGTON.							
Improvement and care of public grounds		89,906 56		89,906 56	89,041 19	9 99	855 38
Repairs, fuel, &c., Executive Mansion		48,010 00		48,010 00	48,008 87	1 13	
Lighting, &c., Executive Mansion		15,012 50		15,012 50	15,012 50		
Repairs of water-pipes and fire-plugs		2,500 00		2,500 00	2,498 38	1 62	
Telegraph to connect the Capitol with the Departments and Government Printing Office		1,500 00		1,500 00	1,500 00		
Building for State, War, and Navy Departments	180,000 00	950,000 00		1,130,000 00	295,000 00		835,000 00
Building corner Seventeenth and F streets			278 12	278 12		278 12	
Increasing water supply of Washington, D. C		1,485,279 30		1,485,279 30	20,000 00		1,465,279 30
Erection of fishway at Great Falls		50,000 00		50,000 00	5,000 00		45,000 00
Total buildings and grounds in and around Washington	180,000 00	2,642,208 36	278 12	2,822,486 48	476,060 94	290 86	2,346,134 68
Deduct repayments					278 12		
Actual expenditures					475,782 82		
Buidings and grounds, Military Academy	39 86	70,269 54		70,309 40	70,267 50	39 86	2 04

BUILDINGS AND ROADS.							
Road from Mound City to the National Military Cemetery, Illinois		15,000 00		15,000 00	10,000 00		5,000 00
Road from New Albany to the National Cemetery, Indiana		12,000 00		12,000 00	12,000 00		
Road from Fort Scott to the National Cemetery, Kansas		3,000 00		3,000 00	3,000 00		
Road from Chattanooga to the National Cemetery, Tennessee		5,000 00		5,000 00	4,999 50		50
Constructing approaches to Fort Bliss, Texas		5,000 00		5,000 00	5,000 00		
Military road from Yankton to Fort Randall		5,000 00		5,000 00	5,000 00		
Ringgold Barracks, Texas	9 00			9 00			9 00
Fort Duncan, Texas	10,000 00			10,000 00			10,000 00
Fort Brown, Texas	25,000 00			25,000 00			25,000 00
Military posts for protection of the Rio Grande frontier	200,000 00			200,000 00	66,842 20		133,157 80
Military post near the northern boundary of Montana (Fort Assinaboine)	30 16			30 16			30 16
Military post near Mussel Shell River, Montana (Fort Maginnis)		25,000 00		25,000 00	24,999 54		46
Military post at Fort McKinney, Wyoming		25,000 00		25,000 00	24,981 34		18 66
Building for military quarters at Fort Leavenworth, Kansas		106,956 77		106,956 77	106,956 77		
Buildings for military quarters at Fort Apache, Arizona		13,928 44		13,928 44	13,928 44		
Army depot building, Saint Paul, Minn		48,500 00		48,500 00			48,500 00
Army and Navy hospital, Hot Springs, Ark		100,000 00		100,000 00			100,000 00
Military post at El Paso, Tex			30	30			30
Military post near Niobrara, Nebr., and Dakota			30	30			30
Total military buildings and roads	235,039 16	364,385 21	60	599,424 97	277,707 79		321,717 18
Deduct repayments					60		
Actual expenditures					277,707 19		
HARBORS AND RIVERS.							
Improving harbor at—							
Belfast, Me	3,000 00			3,000 00			3,000 00
Rockland, Me		40,000 00		40,000 00	40,000 00		
Portland, Me		35,000 00		35,000 00	25,000 00		10,000 00
Richmond, Me		10,000 00		10,000 00	10,000 00		
Portsmouth, N. H	27,000 00	17,000 00		44,000 00	34,000 00		10,000 00
Burlington, Vt		12,000 00		12,000 00	9,000 00		3,000 00
Swanton, Vt		4,500 00		4,500 00	4,500 00		
Boston, Mass	50,000 00	96,500 00		146,500 00	55,000 00		91,500 00
Lynn, Mass		60,000 00		60,000 00	1,818 88		58,181 12
Nantucket, Mass	45,000 00	25,000 00		70,000 00	44,827 90		25,172 10
Newburyport, Mass	50,000 00	40,000 00		90,000 00	55,000 00		35,000 00
Provincetown, Mass		5,000 00		5,000 00	4,977 07		22 93
Plymouth, Mass		14,000 00		14,000 00	13,043 29		956 71
Scituate, Mass		10,000 00		10,000 00	8,327 72		1,672 28
Wareham, Mass		5,000 00		5,000 00	2,620 68		2,379 32
Harbor of refuge at Wood's Holl, Mass		52,000 00		52,000 00	12,000 00		40,000 00
Improving harbor at—							
Hyannis, Mass			278 63	278 63			278 63
Block Island, R. I		19,000 00		19,000 00	19,000 00		
Improving Little Narragansett Bay, R. I		6,000 00		6,000 00	6,000 00		
Improving harbor at—							
Newport, R. I		20,000 00		20,000 00	5,694 50		14,305 50
Bridgeport, Conn		10,000 00		10,000 00	10,000 00		

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
HARBORS AND RIVERS—Continued.							
Improving harbor at—							
Clinton, Conn		$3,000 00		$3,000 00	$3,000 00		
Milford, Conn		5,000 00		5,000 00	5,000 00		
New Haven, Conn		30,000 00		30,000 00	15,000 00		$15,000 00
Breakwater at New Haven, Conn		60,000 00		60,000 00	25,000 00		35,000 00
Improving harbor at—							
Norwalk, Conn		5,000 00		5,000 00	5,000 00		
New London, Conn		9,000 00		9,000 00	9,000 00		
Stonington, Conn		25,000 00		25,000 00	25,000 00		
Southport, Conn		3,000 00		3,000 00	3,000 00		
Buffalo, N. Y	$35,000 00	125,000 00		160,000 00	35,000 00		125,000 00
Charlotte, N. Y		35,000 00		35,000 00	3,000 00		32,000 00
Improving Canarsie Bay, New York	5,000 00	3,000 00		8,000 00	8,000 00		
Improving Echo Harbor, New Rochelle, N. Y	8,000 00	3,000 00		11,000 00	8,000 00		3,000 00
Improving Flushing Bay, New York		5,000 00		5,000 00	5,000 00		
Improving harbor at—							
Greenport, N. Y		10,000 00		10,000 00	5,000 00		5,000 00
Great Sodus Bay, New York		25,000 00		25,000 00	5,000 00		20,000 00
Little Sodus Bay, New York		25,000 00		25,000 00	5,000 00		20,000 00
Mamaroneck, N. Y		15,000 00		15,000 00	1,000 00		14,000 00
New Rochelle, N. Y		15,000 00		15,000 00			15,000 00
Ogdensburg, N. Y		10,000 00		10,000 00	2,000 00		8,000 00
Oswego, N. Y		80,000 00		80,000 00	20,000 00		60,000 00
Oak Orchard, N. Y		3,000 00		3,000 00			3,000 00
Port Chester, N. Y	1,950 00	15,000 00		16,950 00			16,950 00
Port Jefferson, N. Y		8,000 00		8,000 00	8,000 00		
Pultneyville, N. Y		4,000 00		4,000 00	1,000 00		3,000 00
Rondout, N. Y		2,000 00		2,000 00	2,000 00		
Improving Sheep's Head Bay, New York	7,000 00	3,000 00		10,000 00	1,000 00		9,000 00
Improving Sackett's Harbor, New York		7,000 00		7,000 00	1,030 50		5,969 50
Improving harbor at—							
Wilson, N. Y		10,000 00		10,000 00	2,000 00		8,000 00
Erie, Pa	16,000 00	20,000 00		36,000 00	21,000 00		15,000 00
Improving ice-harbor at Marcus Hook, Pa	30,000 00	15,000 00		45,000 00	7,000 00		38,000 00
Improving harbor at Keyport, N. J		30,475 00		30,475 00	333 55		30,141 45
Improving Raritan Bay, New Jersey		50,000 00		50,000 00	10,000 00		40,000 00
Improving harbor at Delaware Breakwater, Delaware		125,000 00		125,000 00	35,000 00		90,000 00
Constructing piers in Delaware Bay, near Lewes, Del		13,000 00		13,000 00	9,000 00		4,000 00
Ice-harbor, at Reedy Island, Del		25,000 00		25,000 00	7,000 00		18,000 00

Improving harbor at—							
Wilmington, Del	27,000 00	50,000 00		77,000 00	50,000 00		27,000 00
Annapolis, Md	9,205 98			9,205 98			9,205 98
Baltimore, Md	230,000 00	450,000 00		680,000 00	330,000 00		350,000 00
Breton Bay, Leonardtown, Md		5,000 00		5,000 00	5,000 00		
Cambridge, Md	187 70			187 70			187 70
Cambridge and Pocomoke River, Maryland	2,500 00			2,500 00			2,500 00
Entrance of Saint Jerome's Creek, Maryland		5,000 00		5,000 00	5,000 00		
Improving harbors at Washington and Georgetown, D. C	38,000 00			38,000 00	15,773 27		22,226 73
Improving harbor at—							
Norfolk, Va	44,934 83	75,000 00		119,934 83	80,000 00		39,934 83
Beaufort, N. C	20,000 00	30,000 00		50,000 00	35,000 00		15,000 00
Charleston, S. C		300,000 00		300,000 00	197,956 97		102,043 03
Georgetown, S. C		7,000 00		7,000 00			7,000 00
Brunswick, Ga		25,000 00		25,000 00	25,000 00		
Savannah, Ga		200,000 00		200,000 00	120,478 12		79,521 88
Improving Apalachicola Bay, Florida		25,000 00		25,000 00	25,000 00		
Improving harbor at—							
Key West, Fla		25,000 00		25,000 00			25,000 00
Pensacola, Fla	45,000 00	50,000 00		95,000 00	30,000 00		65,000 00
Improving Tampa Bay, Florida		20,000 00		20,000 00	20,000 00		
Improving harbor at—							
Mobile, Ala	110,000 00	125,000 00		235,000 00	150,000 00		85,000 00
New Orleans, La	140,010 00			140,010 00	18,000 00		122,010 00
Brazos Santiago, Tex	55,000 00	60,000 00		115,000 00	55,000 00		60,000 00
Galveston, Tex	100,000 00	300,000 00		400,000 00	359,000 00		41,000 00
Ashtabula, Ohio		20,000 00		20,000 00	5,000 00		15,000 00
Black River, Ohio	2,000 00	7,000 00		9,000 00	4,000 00		5,000 00
Cleveland, Ohio	221,997 00	175,000 00		396,997 00	172,000 00		224,997 00
Harbor of refuge, near Cincinnati, Ohio		16,000 00		16,000 00			16,000 00
Improving harbor at—							
Fairport, Ohio	4,500 00	10,000 00		14,500 00	12,000 00		2,500 00
Huron, Ohio		2,500 00		2,500 00	2,500 00		
Ice-harbor, mouth of Muskingum River, Ohio		40,000 00		40,000 00	35,000 00		5,000 00
Improving harbor at—							
Port Clinton, Ohio		6,000 00		6,000 00	6,000 00		
Sandusky City, Ohio	1,000 00	10,000 00		11,000 00	10,500 00		500 00
Toledo, Ohio	20,000 00	50,000 00		70,000 00	46,000 00		24,000 00
Vermillion, Ohio		3,000 00		3,000 00	1,000 00		2,000 00
Michigan City, Ind		80,000 00		80,000 00	62,000 00		18,000 00
Calumet, Ill		35,000 00		35,000 00	25,000 00		10,000 00
Chicago, Ill	50,000 00	200,000 00		250,000 00	175,000 00		75,000 00
Improving Quincy Bay, Illinois		15,000 00		15,000 00	15,000 00		
Improving harbor at—							
Rock Island, Ill	6,000 00			6,000 00			6,000 00
Waukegan, Ill	5,000 00	20,000 00		25,000 00	20,000 00		5,000 00
Au Sable, Mich		5,000 00		5,000 00	3,000 00		2,000 00
Black Lake, Michigan		10,000 00		10,000 00	10,000 00		
Improving ice-harbor of refuge at Belle River, Michigan		5,000 00		5,000 00	5,000 00		
Improving mouth and harbor of Cedar River, Michigan		15,000 00		15,000 00	1,000 00		14,000 00
Improving harbor at Charlevoix, Mich		10,000 00		10,000 00	9,000 00		1,000 00
Improving Eagle Harbor, Michigan	3,500 00			3,500 00			3,500 00

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
HARBORS AND RIVERS—Continued.							
Improving harbor at—							
Frankfort, Mich		$15,000 00		$15,000 00	$13,000 00		$2,000 00
Grand Haven, Mich	$30,000 00	40,000 00		70,000 00	61,845 20		8,154 80
Improving harbor of refuge, Lake Huron, Michigan	30,000 00	75,000 00		105,000 00	65,000 00		40,000 00
Harbor of refuge at Grand Marais, Mich	27,500 00	40,000 00		67,500 00	6,000 00		61,500 00
Improving harbor at—							
Ludington, Mich		12,000 00		12,000 00	9,000 00		3,000 00
Manistee, Mich		15,000 00		15,000 00	13,000 00		2,000 00
Manistique, Mich	2,000 00			2,000 00			2,000 00
Marquette, Mich		16,000 00		16,000 00	7,000 00		9,000 00
Monroe, Mich		1,000 00		1,000 00	1,000 00		
Muskegon, Mich		25,000 00		25,000 00	20,000 00		5,000 00
New Buffalo, Mich		5,000 00		5,000 00			5,000 00
Ontonagon, Mich		20,000 00		20,000 00	5,000 00		15,000 00
Pentwater, Mich		10,000 00		10,000 00	7,000 00		3,000 00
Harbor of refuge at Portage Lake, Mich		25,000 00		25,000 00	15,000 00		10,000 00
Improving harbor at—							
Saint Joseph, Mich		12,000 00		12,000 00	7,000 00		5,000 00
Cheboygan, Mich		10,000 00		10,000 00	10,000 00		
Saugatuck, Mich		8,000 00		8,000 00	2,000 00		6,000 00
South Haven, Mich		10,000 00		10,000 00	7,000 00		3,000 00
Thunder Bay, Michigan		15,000 00		15,000 00	6,000 00		9,000 00
White River, Michigan		12,000 00		12,000 00	8,000 00		4,000 00
Steam launch or tug at harbor of refuge, Lake Huron, Michigan		10,000 00		10,000 00			10,000 00
Improving harbor at—							
Ahnapee, Wis		12,000 00		12,000 00	12,000 00		
Green Bay, Wisconsin		20,000 00		20,000 00	7,000 00		13,000 00
Kenosha, Wis		6,000 00		6,000 00	6,000 00		
Kewaunee, Wis		12,000 00		12,000 00	5,000 00		7,000 00
Manitowoc, Wis		10,000 00		10,000 00	9,000 00		1,000 00
Menomonee, Wis		15,000 00		15,000 00	2,000 00		13,000 00
Milwaukee, Wis		10,000 00		10,000 00			10,000 00
Harbor of refuge at Milwaukee Bay, Wisconsin	10,000 00	100,000 00		110,000 00	60,000 00		50,000 00
Improving harbor at—							
Oconto, Wis	10,000 00	15,000 00		25,000 00	8,000 00		17,000 00
Pensaukee, Wis		10,000 00		10,000 00	1,000 00		9,000 00
Port Washington, Wis		17,000 00		17,000 00	16,000 00		1,000 00
Racine, Wis		7,000 00		7,000 00	1,000 00		6,000 00
Sheboygan, Wis	7,000 00	30,000 00		37,000 00	15,000 00		22,000 00
Improving harbor of refuge at entrance of Sturgeon Bay Canal, Wisconsin		20,000 00		20,000 00	10,000 00		10,000 00

Dredging Superior Bay, Wisconsin		40,000 00		40,000 00	20,000 00		20,000 00
Improving harbor at Two Rivers, Wis		15,000 00		15,000 00	7,000 00		8,000 00
Harbor of refuge on Lake Pepin, Wisconsin and Minnesota		20,000 00		20,000 00			20,000 00
Improving ice-harbor at Dubuque, Iowa		20,000 00		20,000 00	20,000 00		
Improving harbor at—							
Muscatine, Iowa		2,500 00		2,500 00			2,500 00
Duluth, Minn		45,000 00		45,000 00	30,000 00		15,000 00
Grand Marais, Minn		20,000 00		20,000 00	2,000 00		18,000 00
Improving harbor and Mississippi River near Vicksburg, Miss	20,000 00			20,000 00	20,000 00		
Breakwater and harbor of refuge between the Straits of Fuca and San Francisco, Cal	139,742 89			139,742 89			139,742 89
Improving Humboldt harbor and bay, California		40,000 00		40,000 00	25,000 00		15,000 00
Improving harbor at—							
Oakland, Cal	62,000 00	200,000 00		262,000 00	80,000 00		182,000 00
San Francisco, Cal	3,828 57			3,828 57			3,828 57
Wilmington, Cal		100,000 00		100,000 00	70,000 00		30,000 00
Improving entrance to Coos Bay and harbor, California		30,000 00		30,000 00	30,000 00		
Improving Yaquina Bay, Oregon		60,000 00		60,000 00	44,000 00		16,000 00
Improving Cathance River, Maine		5,000 00		5,000 00	5,000 00		
Improving Lubec Channel, Maine	65,000 00	20,000 00		85,000 00	73,000 00		12,000 00
Improving Moosabec Bar at Jonesport, Me		10,000 00		10,000 00	5,000 00		5,000 00
Improving Royal River, Maine		10,000 00		10,000 00	5,050 60		4,949 40
Improving Cocheco River, New Hampshire		28,000 00		28,000 00	10,000 00		18,000 00
Improving Lamprey River, New Hampshire		10,000 00		10,000 00	10,000 00		
Improving Otter Creek, Vermont		2,000 00		2,000 00			2,000 00
Improving Malden River, Massachusetts		10,000 00		10,000 00	6,000 00		4,000 00
Improving Merrimac River, Massachusetts		9,000 00		9,000 00	7,000 00		2,000 00
Improving Taunton River, Massachusetts	25,000 00	25,000 00		50,000 00	50,000 00		
Improving Providence River and Narragansett Bay, Rhode Island		125,000 00		125,000 00	17,973 75		107,026 25
Improving Pawtucket River, Rhode Island			$529 58	529 58			529 58
Improving Connecticut River, Connecticut	10,000 00	45,000 00		55,000 00	10,439 85		44,560 15
Improving Connecticut River between Hartford and Holyoke, Conn	10,000 00			10,000 00			10,000 00
Improving Housatonic River, Connecticut		2,000 00		2,000 00	2,000 00		
Improving Thames River, Connnecticut	20,000 00	35,000 00		55,000 00	35,000 00		20,000 00
Improving Buttermilk Channel, New York	50,000 00	60,000 00		110,000 00	60,000 00		50,000 00
Improving East Chester Creek, New York	7,000 00			7,000 00			7,000 00
Removing obstructions in East River and Hell Gate, New York	50,000 00	200,000 00		250,000 00	220,000 00		30,000 00
Improving channel in Gowanus Bay, New York	10,000 00	20,000 00		30,000 00	10,000 00		20,000 00
Improving Grass River at Massena, N. Y		3,000 00		3,000 00	500 00		2,500 00
Improving Harlem River, New York	400,000 00			400,000 00			400,000 00
Improving Hudson River, New York	45,000 00	10,000 00		55,000 00	10,000 00		45,000 00
Improving Newtown Creek, New York		15,000 00		15,000 00	10,000 00		5,000 00
Improving Niagara River, New York		1,500 00		1,500 00			1,500 00
Improving Sumpawanus Inlet, New York	4,000 00	2,000 00		6,000 00	6,000 00		
Improving Ticonderoga River, New York		5,000 00		5,000 00	5,000 00		
Improving channel between Staten Island and New Jersey, N. J		40,000 00		40,000 00	40,000 00		
Improving Cheesequake's Creek, New Jersey	24,000 00	15,000 00		39,000 00	25,000 00		14,000 00
Improving Cohansey Creek, New Jersey		5,000 00		5,000 00	5,000 00		
Improving Elizabeth River, New Jersey		8,000 00		8,000 00	3,000 00		5,000 00
Improving Manasquan River, New Jersey	1,000 00	7,000 00		8,000 00	7,000 00		1,000 00
Improving Mantua Creek, New Jersey		3,000 00		3,000 00			3,000 00
Improving Maurice River, New Jersey		3,000 00		3,000 00			3,000 00

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
HARBORS AND RIVERS—Continued.							
Improving Mattawan Creek, New Jersey		$6,000 00		$6,000 00	$6,000 00		
Improving Passaic River, New Jersey	$1,932 62	7,000 00		8,932 62			$8,932 62
Improving Passaic River from Pennsylvania Railroad bridge to month, New Jersey		43,000 00		43,000 00	15,000 00		28,000 00
Improving Rahway River, New Jersey		7,000 00		7,000 00	2,000 00		5,000 00
Improving Raritan River, New Jersey	20,000 00	25,000 00		45,000 00	30,000 00		15,000 00
Improving Rancocas River, New Jersey		10,000 00		10,000 00	10,000 00		
Improving Racoon River, New Jersey		3,000 00		3,000 00	750 00		2,250 00
Improving Salem River, New Jersey		1,500 00		1,500 00	1,500 00		
Improving Shrewsbury River, New Jersey	11,000 00	30,000 00		41,000 00	26,000 00		15,000 00
Improving South River, New Jersey	45,000 00	10,000 00		55,000 00	55,000 00		
Improving Woodbridge Creek, New Jersey		5,000 00		5,000 00	5,000 00		
Improving Woodbury Creek, New Jersey		5,000 00		5,000 00	500 00		4,500 00
Improving Allegheny River, Pennsylvania		15,000 00		15,000 00	15,000 00		
Improving Chester Creek, Pennsylvania		3,000 00		3,000 00	3,000 00		
Improving Delaware River—							
Below Bridesburg, Pa	65,000 00	136,000 00		201,000 00	117,000 00		84,000 00
Between Trenton and Bridesburg, Pa		10,000 00		10,000 00	10,000 00		
At Schooner Ledge, Pennsylvania and Delaware		40,000 00		40,000 00	40,000 00		
Near Cherry Island Flats, Pennsylvania and Delaware	23,000 00	100,000 00		123,000 00	58,000 00		65,000 00
Improving Frankford Creek, Pennsylvania		10,000 00		10,000 00	7,000 00		3,000 00
Improving Schuylkill River, Pennsylvania	44,000 00	25,000 00		69,000 00	34,000 00		35,000 00
Improving Broad Creek, Delaware		5,000 00		5,000 00	5,000 00		
Improving Broadkiln River, Delaware	8,900 00	5,000 00		13,900 00			13,900 00
Improving Duck Creek, Delaware		2,000 00		2,000 00	2,000 00		
Improving Indian River, Delaware		10,000 00		10,000 00	3,000 00		7,000 00
Improving Mispillion Creek, Delaware		3,000 00		3,000 00	3,000 00		
Improving north branch of Susquehanna River, Pennsylvania		15,000 00		15,000 00	10,000 00		5,000 00
Improving Saint Jones River, Delaware	4,500 00			4,500 00			4,500 00
Improving Choptank River, Maryland		5,000 00		5,000 00	5,000 00		
Improving Corsica Creek, Maryland		5,000 00		5,000 00			5,000 00
Improving Chester River, Maryland	2,666 84	6,500 00		9,166 84	6,666 84		2,500 00
Improving Elk River, Maryland		6,500 00		6,500 00	2,500 00		4,000 00
Improving Susquehanna River near Havre de Grace, Md		25,000 00		25,000 00	25,000 00		
Improving water passage between Deal's Island and the mainland, Maryland		5,000 00		5,000 00	500 00		4,500 00
Improving Potomac River, Maryland		400,000 00		400,000 00	85,000 00		315,000 00
Improving Wicomico River, Maryland	1,000 00			1,000 00			1,000 00
Improving Appomattox River, Virginia		35,000 00		35,000 00	20,000 00		15,000 00
Improving Archer's Hope River, Virginia		5,000 00		5,000 00			5,000 00
Improving Blackwater River, Virginia	9 64	1,500 00		1,509 64			1,509 64
Improving Chickahominy River, Virginia	1,500 00	5,000 00		6,500 00	6,500 00		

Improving Dan River, Virginia and North Carolina		7,500 00		7,500 00	7,500 00		
Improving James River, Virginia		75,000 00		75,000 00	5,000 00		70,000 00
Improving Nomini Creek, Virginia		2,000 00		2,000 00			2,000 00
Improving North Landing River, Virginia and North Carolina		8,000 00		8,000 00			8,000 00
Improving New River, West Virginia		12,000 00		12,000 00	8,000 00		4,000 00
Improving Pagan Creek, Virginia	55 53			55 53			55 53
Improving Pamunkey River, Virginia		2,500 00		2,500 00	500 00		2,000 00
Improving Rappahannock River, Virginia		17,000 00		17,000 00	17,000 00		
Improving Staunton River, Virginia		7,000 00		7,000 00	3,000 00		4,000 00
Improving Totusky River, Virginia	4,500 00	5,000 00		9,500 00	8,000 00		1,500 00
Improving Urbana Creek, Virginia		4,000 00		4,000 00	4,000 00		
Improving York River, Virginia		25,000 00		25,000 00	25,000 00		
Improving Elk River, West Virginia		2,000 00		2,000 00			2,000 00
Improving Guyandotte River, West Virginia	1,400 00	2,000 00		3,400 00	2,000 00		1,400 00
Improving Great Kanawha River, West Virginia	110,000 00	200,000 00		310,000 00	150,000 00		160,000 00
Improving Little Kanawha River, West Virginia	15,000 00	31,000 00		46,000 00	15,000 00		31,000 00
Improving Monongahela River, West Virginia	12,000 00	25,000 00		37,000 00	22,000 00		15,000 00
Improving Monongahela River, West Virginia and Pennsylvania	25,000 00			25,000 00	15,000 00		10,000 00
Improving Shenandoah River, West Virginia	17,312 20			17,312 20			17,312 20
Improving Cape Fear River from the ocean to Wilmington, N. C	55,000 00	225,000 00		280,000 00	135,000 00		145,000 00
Improving Cape Fear River from Wilmington to Fayetteville, N. C	15,000 00	30,000 00		45,000 00	15,000 00		30,000 00
Improving Currituck Sound and North River Bar, North Carolina		20,000 00		20,000 00	20,000 00		
Improving Contentnia Creek, North Carolina		10,000 00		10,000 00	10,000 00		
Improving French Broad River, North Carolina		5,000 00		5,000 00	3,000 00		2,000 00
Improving Lillington River, North Carolina	3,000 00	3,000 00		6,000 00	6,000 00		
Improving Meherin River, North Carolina		5,000 00		5,000 00			5,000 00
Improving Neuse River, North Carolina	15,000 00	35,000 00		50,000 00	30,000 00		20,000 00
Improving New River, North Carolina		5,000 00		5,000 00			5,000 00
Improving Pamlico and Tar Rivers, North Carolina		10,000 00		10,000 00	5,000 00		5,000 00
Improving Roanoke River, North Carolina		5,000 00		5,000 00	3,000 00		2,000 00
Improving Town Creek, North Carolina	1,000 00			1,000 00	1,000 00		
Improving Trent River, North Carolina		10,000 00		10,000 00	5,000 00		5,000 00
Improving Waccamaw River, North Carolina and South Carolina		4,400 00		4,400 00	4,400 00		
Improving Yadkin River, North Carolina	12,000 00	25,000 00		37,000 00	6,000 00		31,000 00
Improving Edisto River, South Carolina		8,000 00		8,000 00	8,000 00		
Improving Great Pedee River, South Carolina		6,000 00		6,000 00	6,000 00		
Improving Santee River, South Carolina	20,000 00	20,000 00		40,000 00			40,000 00
Improving Salkahatchie River, South Carolina		5,000 00		5,000 00			5,000 00
Improving Wateree River, South Carolina		15,000 00		15,000 00	5,000 00		10,000 00
Improving Wappoo Cut, South Carolina	10,000 00	10,000 00		20,000 00	20,000 00		
Improving Altamaha River, Georgia		15,000 00		15,000 00	1,000 00		14,000 00
Improving Chattahoochee River, Georgia	10,000 00	25,000 00		35,000 00	20,000 00		15,000 00
Improving Coosa River, Georgia and Alabama	15,000 00	75,000 00		90,000 00	48,700 00		41,300 00
Improving Cumberland Sound, Georgia and Florida		50,000 00		50,000 00	50,000 00		
Improving Etowah River, Georgia	8,762 20			8,762 20	62 20		8,700 00
Improving Flint River, Georgia		25,000 00		25,000 00	20,000 00		5,000 00
Improving Ocmulgee River, Georgia		5,000 00		5,000 00	4,000 00		1,000 00
Improving Oconee River, Georgia		5,000 00		5,000 00	1,500 00		3,500 00
Improving Ostenaula and Coosawattee Rivers, Georgia		1,000 00		1,000 00			1,000 00
Improving Romley Marsh, Georgia		10,000 00		10,000 00	61 63		9,938 37
Improving Savannah River, Georgia		40,000 00		40,000 00	40,000 00		
Improving Saint Augustin's Creek, Georgia	3,417 66			3,417 66			3,417 66

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30 1883.	Balances June 30, 1883.
HARBORS AND RIVERS—Continued.							
Improving Apalachicola River, Florida		$2,000 00		$2,000 00			$2,000 00
Improving Choctawhatchee River, Florida and Alabama		20,000 00		20,000 00	$18,000 00		2,000 00
Improving Caloosahatchee River, Florida		5,000 00		5,000 00			5,000 00
Improving Escambia and Conecuh Rivers, Florida and Alabama		12,000 00		12,000 00	6,000 00		6,000 00
Improving inside passage between Fernandina and Saint John's, Fla	$4,000 00			4,000 00			4,000 00
Improving Manatee River, Florida		12,000 00		12,000 00	12,000 00		
Improving Peas Creek, Florida		4,000 00		4,000 00			4,000 00
Improving Saint John's River, Florida		150,000 00		150,000 00	85,000 00		65,000 00
Improving Suwanee River, Florida		5,000 00		5,000 00	5,000 00		
Improving Volusia Bar, Florida		5,000 00		5,000 00	5,000 00		
Improving Alabama River, Alabama	5,000 00	20,000 00		25,000 00	15,000 00		10,000 00
Improving Cahaba River, Alabama		20,000 00		20,000 00	10,000 00		10,000 00
Improving Tallapoosa River, Alabama		15,000 00		15,000 00			15,000 00
Improving Warrior and Tombigbee Rivers, Alabama and Mississippi		30,000 00		30,000 00	30,000 00		
Improving Big Sunflower River, Mississippi		5,000 00		5,000 00	5,000 00		
Improving Noxubee River, Mississippi		10,000 00		10,000 00	10,000 00		
Improving Old Town Creek, Mississippi		3,000 00		3,000 00			3,000 00
Improving Pascagoula River, Mississippi		8,000 00		8,000 00	8,000 00		
Improving Pearl River, Mississippi	10,000 00	2,500 00		12,500 00			12,500 00
Improving Pearl River below Jackson, Miss	52,000 00	15,000 00		67,000 00	57,000 00		10,000 00
Improving Roadstead into Back Bay of Biloxi, Mississippi		5,000 00		5,000 00	11 45		4,988 55
Improving Tallahatchie River, Mississippi		3,000 00		3,000 00	3,000 00		
Improving Tombigbee River, Mississippi		1,000 00		1,000 00			1,000 00
Improving Tchula Lake, Mississippi		2,500 00		2,500 00	2,500 00		
Improving Yazoo River, Mississippi		8,000 00		8,000 00	8,000 00		
Improving Yallabusha River, Mississippi		3,500 00		3,500 00	3,500 00		
Improving Amite River, Louisiana	12,700 00			12,700 00	7,700 00		5,000 00
Improving Bayou Black, Louisiana	5,000 00	10,000 00		15,000 00	1,500 00		13,500 00
Improving Bayou Bœuf, Louisiana		5,000 00		5,000 00	5,000 00		
Improving Bayou Bartholomew, Louisiana and Arkansas		5,000 00		5,000 00	5,000 00		
Improving Calcasieu Pass, Louisiana		3,000 00		3,000 00			3,000 00
Improving Calcasieu River, Louisiana	3,000 00	7,000 00		10,000 00			10,000 00
Improving Bayou Courtableau, Mississippi	6,000 00			6,000 00	3,000 00		3,000 00
Improving Bayou La Fourches, Louisiana	3,000 00			3,000 00			3,000 00
Improving Red River, Louisiana		75,000 00		75,000 00	35,000 00		40,000 00
Improving mouth of Red River, Louisiana	85,000 00			85,000 00	29,500 00		55,500 00
Improving Tangipahoa River, Louisiana	2,000 00			2,000 00			2,000 00
Improving Tchefuncte River, Louisiana	1,500 00	1,500 00		3,000 00	500 00		2,500 00
Improving Bayou Teche, Louisiana	18,000 00			18,000 00	2,000 00		16,000 00
Connecting Bayou Teche with Grand Lake at Charenton, La	25,000 00			25,000 00	800 00		24,200 00

Improving Bayou Terre Bonne, Louisiana	6,000 00	7,000 00		13,000 00	13,000 00		
Improving Tickfaw River, Louisiana	2,000 00	2,000 00		4,000 00	2,000 00		2,000 00
Improving Vermillion River, Louisiana	4,700 00			4,700 00	4,700 00		
Improving Aransas Pass and Bay, Texas		100,000 00		100,000 00	85,000 00		15,000 00
Improving mouth of Brazos River, Texas		50,000 00		50,000 00	35,000 00		15,000 00
Improving Buffalo Bayou, Texas		50,000 00		50,000 00	25,000 00		25,000 00
Improving Cypress Bayou, Texas and Louisiana	1,500 00			1,500 00	1,500 00		
Protection of river bank at Fort Brown, Texas		1,000 00		1,000 00			1,000 00
Improving ship channel in Galveston Bay, Texas	82,000 00	94,500 00		176,500 00	32,000 00		144,500 00
Improving Neches River, Texas		5,000 00		5,000 00			5,000 00
Improving Passo Cavallo, Texas	24,500 00	60,000 00		84,500 00	24,500 00		60,000 00
Improving Sabine River, Texas	11,500 00	4,000 00		15,500 00	11,500 00		4,000 00
Improving Sabine Pass, Texas	120,087 00	150,000 00		270,087 00	150,000 00		120,087 00
Improving Trinity River, Texas	5,000 00	8,000 00		13,000 00			13,000 00
Improving Arkansas River, Arkansas		20,000 00		20,000 00	20,000 00		
Improving Arkansas River, Arkansas and Kansas	6,000 00	20,000 00		26,000 00	6,000 00		20,000 00
Improving Black River, Arkansas and Missouri		10,000 00		10,000 00	6,000 00		4,000 00
Improving Fourche Le Fevre River, Arkansas		4,000 00		4,000 00	4,000 00		
Improving L'Anguille River, Arkansas	1,500 00			1,500 00			1,500 00
Improving Ouachita River, Arkansas and Louisiana	1,000 00	12,000 00		13,000 00	13,000 00		
Improving Saline River, Arkansas		4,000 00		4,000 00	2,000 00		2,000 00
Improving White River above Buffalo Shoals, Arkansas		4,000 00		4,000 00	1,000 00		3,000 00
Improving White River between Jacksonport and Buffalo Shoals, Arkansas		6,000 00		6,000 00	4,000 00		2,000 00
Improving White and Saint Francis Rivers, Arkansas		12,000 00		12,000 00	10,000 00		2,000 00
Improving Big Hatchee River, Tennessee		3,000 00		3,000 00	3,000 00		
Improving Caney Fork River, Tennessee		4,000 00		4,000 00			4,000 00
Improving Clinch River, Tennessee		3,000 00		3,000 00	1,500 00		1,500 00
Improving Cumberland River above Nashville, Tenn		45,000 00		45,000 00	36,000 00		9,000 00
Improving Cumberland River below Nashville, Tenn		15,000 00		15,000 00	13,000 00		2,000 00
Improving Duck River, Tennessee		3,000 00		3,000 00	3,000 00		
Improving French Broad River, Tennessee		5,000 00		5,000 00	5,000 00		
Improving Hiawassee River, Tennessee		1,500 00		1,500 00	1,500 00		
Improving Little Tennessee River, Tennessee		5,000 00		5,000 00	1,500 00		3,500 00
Improving Obey's River, Tennessee		5,000 00		5,000 00			5,000 00
Improving South Forked Deer River, Tennessee		3,000 00		3,000 00	3,000 00		
Improving Tennessee River above Chattanooga, Tenn		7,000 00		7,000 00	7,000 00		
Improving Tennessee River below Chattanooga, Tenn		250,000 00		250,000 00	225,000 00		25,000 00
Improving Big Sandy River, Kentucky	89,500 00	25,000 00		114,500 00	10,941 08		103,558 92
Improving Cumberland River above mouth of Jellico, Kentucky		5,000 00		5,000 00			5,000 00
Improving Kentucky River, Kentucky		225,000 00		225,000 00	112,329 62		112,670 38
Improving South Fork of Cumberland River, Kentucky		3,000 00		3,000 00	2,001 02		998 98
Improving Tradewater River, Kentucky		3,500 00		3,500 00			3,500 00
Operating and care of Louisville and Portland Canal, Kentucky		77,000 00		77,000 00	77,000 00		
Improving Ohio River, Kentucky	135,000 00	350,000 00		485,000 00	390,000 00		95,000 00
Improving Rocky River, Ohio	1,390 00			1,390 00			1,390 00
Improving Sandusky River, Ohio		4,000 00		4,000 00	3,600 00		400 00
Improving White River, Indiana		20,000 00		20,000 00	15,000 00		5,000 00
Improving Wabash River, Indiana and Illinois		70,000 00		70,000 00	50,000 00		20,000 00
Improving Illinois River, Illinois	265,000 00	175,000 00		440,000 00	170,000 00		270,000 00
Operating and care of Des Moines Rapids Canal, Iowa and Illinois		75,000 00		75,000 00	75,000 00		
Improving Mississippi River		4,923,000 00		4,923,000 00	3,570,000 00		1,353,000 00
Improving Upper Mississippi River		25,000 00		25,000 00	21,000 00		4,000 00

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
HARBORS AND RIVERS—Continued.							
Improving reservoirs at headwaters of Mississippi River	$135,284 95	$300,000 00		$434,784 95	$148,300 55		$286,984 40
Gauging the waters of the Lower Mississippi and its tributaries		5,000 00		5,000 00	5,000 00		
Improving mouth of Mississippi River	50 00			50 00			50 00
Improving Mississippi, Missouri, and Arkansas Rivers	80,000 00	185,000 00		265,000 00	136,000 00		129,000 00
Improving Mississippi River:							
From Des Moines Rapids to mouth of Illinois River	65,000 00			65,000 00	65,000 00		
Above Falls of Saint Anthony, Minnesota		10,000 00		10,000 00	6,000 00		4,000 00
Between mouths of Ohio and Illinois Rivers	75,000 00			75,000 00	75,000 00		
From Saint Paul to Des Moines Rapids	26,000 00	250,000 00		276,000 00	191,000 00		85,000 00
At Natchez and Vidalia, Miss. and La	5,000 00			5,000 00	5,000 00		
At Quincy, Ill	12,000 00			12,000 00	5,000 00		7,000 00
Improving Des Moines Rapids, Mississippi River, Iowa and Illinois	29,000 00	30,000 00		59,000 00	47,500 00		11,500 00
Dry dock at Des Moines Rapids Canal, Mississippi River		30,000 00		30,000 00	12,000 00		18,000 00
Removal of bar in Mississippi River opposite Dubuque, Iowa	8,000 00			8,000 00	3,000 00		5,000 00
Construction of lock and dam at Meeker's Island, Mississippi River	25,000 00			25,000 00			25,000 00
Improving Rock Island Rapids, Mississippi River, Iowa and Illinois	3,000 00			3,000 00	1,000 00		2,000 00
Preservation of Falls of Saint Anthony and navigation of Mississippi River	1,000 00			1,000 00	1,000 00		
Constructing jetties and other works at South Pass, Mississippi River		150,000 00		150,000 00	150,000 00		
Improving Mississippi River opposite Saint Louis, Mo	60,000 00			60,000 00	40,000 00		20,000 00
Improving Missouri River:							
From mouth to Sioux City, Iowa		850,000 00		850,000 00	610,000 00		240,000 00
At Council Bluffs, Iowa, and Omaha, Nebr	1,000 00			1,000 00	1,000 00		
From Sioux City, Iowa, to Fort Benton, Mont		100,000 00		100,000 00	47,300 00		52,700 00
Survey of Missouri River from its mouth to Fort Benton, Mont		40,000 00		40,000 00	28,000 00		12,000 00
Improving Cuivre River, Missouri		5,000 00		5,000 00	5,000 00		
Improving Gasconade River, Missouri		10,000 00		10,000 00	9,500 00		500 00
Improving Osage River, Missouri and Kansas	10,000 00			10,000 00	10,000 00		
Improving Clinton River, Michigan		6,000 00		6,000 00	6,000 00		
Improving Detroit River, Michigan		60,000 00		60,000 00	60,000 00		
Improving Grand River, Michigan	2,000 00	15,000 00		17,000 00	9,000 00		8,000 00
Improving Hay Lake channel, Sault Sainte Marie River, Michigan		200,000 00		200,000 00	35,000 00		165,000 00
Operating and care of Saint Clair Falls Canal, Michigan		5,000 00		5,000 00	5,000 00		
Improving Saginaw River, Michigan	1,000 00	125,000 00		126,000 00	22,000 00		104,000 00
Improving Saint Mary's River and Saint Mary's Falls Canal, Michigan	60,000 00			60,000 00	60,000 00		
Operating and care of Saint Mary's Falls Canal, Michigan		42,200 00		42,200 00	42,200 00		
Improving Chippewa River, Wisconsin		35,000 00		35,000 00	35,000 00		
Improving Chippewa River at Yellow Banks, Wisconsin		30,000 00		30,000 00	13,000 00		17,000 00
Improving Fox and Wisconsin Rivers, Wisconsin	15,000 00	200,000 00		215,000 00	130,000 00		85,000 00
Payment to commissioner to appraise damages to lands in Wisconsin		2,460 00		2,460 00	2,460 00		

Constructing dam at Goose Rapids, Red River of the North, Minnesota and Dakota	20,000 00	30,000 00	.....	50,000 00	600 00	.....	49,400 00
Improving Red River of the North, Minnesota and Dakota	20,000 00	10,000 00	.....	30,000 00	26,000 00	.....	4,000 00
Improving Saint Anthony's Falls, Minnesota	.....	25,000 00	.....	25,000 00	25,000 00	.....	.....
Improving Saint Croix River below Taylor's Falls, Minnesota and Wisconsin	.....	30,000 00	.....	30,000 00	22,000 00	.....	8,000 00
Improving Yellowstone River, Montana and Dakota	.....	20,000 00	.....	20,000 00	17,400 00	.....	2,600 00
Improving Lower Clearwater River, Idaho	.....	5,000 00	.....	5,000 00	2,000 00	.....	3,000 00
Improving Sacramento River, California	5,000 00	.....	.....	5,000 00	5,000 00	.....	.....
Improving Sacramento and Feather Rivers, California	.....	250,000 00	.....	250,000 00	25,000 00	.....	225,000 00
Improving San Joaquin River, California	5,000 00	40,000 00	.....	45,000 00	25,000 00	.....	20,000 00
Improving Petalumas Creek, California	8,000 00	14,000 00	.....	22,000 00	20,000 00	.....	2,000 00
Constructing canal around the Cascades of Columbia River, Oregon	.....	265,000 00	.....	265,000 00	215,000 00	.....	50,000 00
Gauging the waters at the mouth of Columbia River, Oregon	.....	500 00	.....	500 00	500 00	.....	.....
Improving Upper Columbia River, Oregon	.....	6,000 00	.....	6,000 00	2,000 00	.....	4,000 00
Improving Coquille River, Oregon	.....	10,000 00	.....	10,000 00	10,000 00	.....	.....
Examination of mouth of Columbia River, Oregon	.....	7,500 00	.....	7,500 00	7,500 00	.....	.....
Improving Umpqua River, Oregon	4,685 89	.....	.....	4,685 89	.....	.....	4,685 89
Improving Upper Willamette River, Oregon	.....	5,000 00	.....	5,000 00	5,000 00	.....	.....
Improving Lower Willamette River, Oregon	.....	100,000 00	.....	100,000 00	95,000 00	.....	5,000 00
Improving Cowlitz and Columbia Rivers, Washington Territory	.....	1,000 00	.....	1,000 00	1,000 00	.....	.....
Improving Chehalis River, Washington Territory	.....	3,000 00	.....	3,000 00	2,000 00	.....	1,000 00
Improving Skagit, Stielaquamish, Nooksack, Snohomish, and Snoqualmie Rivers, Washington Territory	.....	20,000 00	.....	20,000 00	13,500 00	.....	6,500 00
Surveys to connect Delaware and Chesapeake Bays	.....	10,000 00	.....	10,000 00	10,000 00	.....	.....
Testing flume invented by M. J. Adams	.....	8,000 00	.....	8,000 00	4,000 00	.....	4,000 00
Examinations and surveys at South Pass, Mississippi River	3,603 26	10,000 00	.....	13,603 26	7,743 59	.....	5,859 67
Examinations, surveys, and contingencies of rivers and harbors	10,214 84	150,000 00	.....	160,214 84	61,303 43	.....	98,911 41
Removal of sunken vessels or crafts obstructing or endangering navigation	733 98	24,392 24	.....	25,126 22	25,126 22	.....	.....
Surveys of Hennepin Canal	.....	30,000 00	.....	30,000 00	21,000 00	.....	9,000 00
	4,738,263 58	19,124,927 24	$808 21	23,863,999 03	13,842,349 48	.....	10,021,649 55
Deduct repayments	.....	.....	.....	.....	808 21	.....	.....
Actual expenditures	.....	.....	.....	.....	13,841,541 27	.....	.....
SIGNAL SERVICE.							
Observation and report of storms	6 00	284,082 78	.....	284,088 78	284,054 19	34 59	.....
Construction, maintenance, and repair of military telegraph lines	119 04	49,000 00	.....	49,119 04	48,989 00	120 54	9 50
Observation and exploration in the Arctic Seas	.....	66,000 00	.....	66,000 00	53,000 00	.....	13,000 00
	125 04	399,082 78	.....	399,207 82	386,043 19	155 13	13,009 50
NATIONAL CEMETERIES.							
National cemeteries	8,417 18	100,170 45	.....	108,587 63	103,435 52	2,129 41	3,022 70
Pay of superintendents of national cemeteries	4,211 54	60,440 00	.....	64,651 54	59,014 18	2,236 53	3,400 83
Headstones for graves of soldiers in private cemeteries	87,027 49	.....	.....	87,027 49	18,707 35	.....	68,320 14
Purchase of the Arlington estate	.....	150,000 00	.....	150,000 00	125,000 00	.....	25,000 00
	99,656 21	310,610 45	.....	410,266 66	306,157 05	4,365 94	99,743 67

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
CIVIL SURVEYS AND MISSISSIPPI RIVER COMMISSION.							
Survey of northern and northwestern lakes	$0 15	$12,000 00		$12,000 15	$5,939 73	$764 46	$5,296 02
Examinations and surveys of northwestern lakes			$684 18	684 18		684 18	
Surveys and reconnoissances in military divisions and departments	433 63		12 00	445 63		445 63	
Transportation of reports and maps to foreign countries	500 00	300 00		800 00	532 21	9 18	258 61
Mississippi River Commission	15,000 00	150,000 00		165,000 00	165,000 00		
Survey of Gettysburg battle-field	32,500 00			32,500 00	7,500 00		25,000 00
Geographical survey of territory west of the 100 meridian	7,500 00			7,500 00	5,500 00		2,000 00
	55,933 78	162,300 00	696 18	218,929 96	184,471 94	1,903 39	32,554 63
Deduct repayments					696 18		
Actual expenditures					183,775 76		
ARTIFICIAL LIMBS AND APPLIANCES, AND SUPPORT OF TRANSIENT PAUPERS.							
Support and medical treatment of transient paupers	1,250 00	15,000 00		16,250 00	15,000 00		1,250 00
Artificial limbs	66,173 10	120,000 00		186,173 10	94,852 58	9,900 94	81,419 58
Appliances for disabled soldiers	4,000 00	2,000 00		6,000 00	131 00	2,369 00	3,500 00
Trusses for disabled soldiers		21 00		21 00	21 00		
	71,423 10	137,021 00		208,444 10	110,004 58	12,269 94	86,169 58
MISCELLANEOUS.							
Support of Military Prison at Fort Leavenworth, Kans		87,538 25		87,538 25	85,540 80		1,997 45
Publication of official records of the War of the Rebellion	20,490 00	40,417 51		60,907 51	33,486 68		27,420 83
Expenses of military convicts	17,934 00	12,000 00		29,934 00	7,544 57	6,969 80	15,419 63
Artillery school at Fort Monroe, Va		5,000 00		5,000 00	4,998 40		1 60
Support of National Home for Disabled Volunteer Soldiers	3 04	1,122,088 03		1,122,091 07	1,122,088 03	3 04	
Support of the Soldier's Home		147,970 17		147,970 17	97,304 94		50,665 23
Arming and equipping the militia	61,282 20	200,000 00		261,282 20	107,614 41	483 13	153,184 66
	99,709 24	1,615,013 96		1,714,723 20	1,458,577 83	7,455 97	248,689 40
WAR CLAIMS OF VOLUNTEERS.							
Collection and payment of bounty, prize-money, and other claims of colored soldiers and sailors		2,900 00		2,900 00	2,823 13	76 87	
Pay of two and three year volunteers		268,934 30		268,934 30	104,591 71	14,342 59	150,000 00
Pay of volunteers (Mexican war)		476 49		476 49	476 49		
Extra pay to officers and men who served in the Mexican war		479 00		479 00	479 00		
Pay of Florida volunteers		680 20		680 20	680 20		
Pay of mounted riflemen under Col. John C. Fremont in 1846		206 66		206 66	206 66		

Pay, transportation, services, and supplies of Oregon and Washington volunteers in 1855 and 1856		5,551 81		5,551 81	5,551 81		
Rogue River Indian war in 1854		613 14		613 14	613 14		
Traveling expenses of First Michigan Cavalry		359 34		359 34	359 34		
Traveling expenses of California and Nevada volunteers		155 12		155 12	155 12		
Collecting, drilling, and organizing volunteers		3 12	7 60	10 72	3 12	7 60	
Draft and substitute fund		84 30		84 30	84 30		
Transportation of officers and their baggage		103 10	123 28	226 38	103 10	123 28	
Services and supplies of Montana volunteers in the Nez Percé Indian war		10,629 00		10,629 00	9,697 00		932 00
Horses and other property lost in the military service		105,188 66		105,188 66	105,061 60		127 06
Commutation of rations to prisoners of war in rebel States		32,953 50		32,953 50	32,555 50		398 00
Bounty under act of July 28, 1866		140,000 00		140,000 00	75,214 30	4,785 70	60,000 00
Bounty to volunteers, widows, and legal heirs		394,427 88		394,427 88	237,550 91	6,876 97	150,000 00
Bounty to Fifteenth and Sixteenth Missouri Cavalry Volunteers		7,000 00		7,000 00	7,000 00		
Capture of Jefferson Davis	2,382 38			2,382 38			2,382 38
	2,382 38	970,745 62	130 88	973,258 88	583,206 43	26,218 01	363,839 44
Deduct repayments					130 88		
Actual expenditures					583,075 55		
WAR CLAIMS OF STATES.							
Refunding to States expenses incurred in raising volunteers		454,163 07		454,163 07	454,163 07		
Reimbursing Nebraska for expenses in suppressing Indian hostilities		4,193 78		4,193 78	4,193 78		
Reimbursing Missouri for militia expenses during the rebellion		234,594 10		234,594 10	234,580 10		14 00
Reimbursing Oregon for expenses in suppressing Modoc Indian hostilities		70,268 08		70,268 08	70,268 08		
Reimbursing State and citizens of California for expenses in suppressing Modoc Indian hostilities.		4,441 33		4,441 33	3,827 08		614 25
Refund to State of Georgia for money expended for common defense in 1777		35,555 42		35,555 42			35,555 42
		803,215 78		803,215 78	767,032 11		36,183 67
PRIVATE RELIEF ACTS.							
Claims of loyal citizens for supplies furnished during the rebellion	7,189 00			7,189 00			7,189 00
Claims for quartermaster's stores and commissary supplies	16,268 18	299,036 45		315,304 63	310,782 75		4,521 88
Awards for quartermaster's stores and commissary supplies taken by the Army in Tennessee.	130 00			130 00			130 00
Miscellaneous claims audited by Third Auditor under section 4, act June 14, 1878.	2,269 75			2,269 75			2,269 75
Rations for relief of persons rendered destitute by overflow of Mississippi River.	41 12		691 20	732 32			732 32
Twenty per cent. additional compensation		1,325 61		1,325 61	1,325 61		
Allowance for reduction of wages under the eight-hour law		30 56		30 56	30 56		
Removal of the remains of the late Major-General George Sykes, U. S. A			569 26	569 26			569 26
Relief of M. J. Kelly and others of Company B, Twentieth United States Infantry.		622 97		622 97	622 97		
Relief of heirs of Hyacinthe R. Agnel		650 00		650 00	650 00		
Relief of John W. Humphry		1,260 00		1,260 00	1,260 00		
Relief of William H. Donahoe		250 00		250 00	250 00		
Relief of Charles A. Luke		1,200 00		1,200 00	1,200 00		
Relief of William Wallace Screws		365 25		365 25	365 25		
Relief of William S. Hansell and Sons		901 57		901 57	901 57		

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1883, &c.—Continued.

Title of appropriation.	Balances July 1, 1882.	Appropriated July 1, 1882, to June 30, 1883.	Repayments.	Amount available.	Drawn by requisition.	Carried to surplus fund June 30, 1883.	Balances June 30, 1883.
PRIVATE RELIEF ACTS—Continued.							
Relief of Joseph C. Irwin		$8,378 46		$8,378 46	$8,378 46		
Relief of Charles H. Tompkins		976 00		976 00	976 00		
Relief of heirs of Peter Gallagher		6,128 82		6,128 82	6,128 82		
Relief of Joseph Westcott and Son		3,468 00		3,468 00	3,468 00		
Relief of Mrs. Louisa F. Stone		170 00		170 00	170 00		
Compensation to officers and men of Company B, Fourteenth United States Infantry.		6,620 62		6,620 62	6,620 62		
Reimbursement of James Burke, Superintendent National Cemetery		180 40		180 40	180 40		
	$25,898 05	331,564 71	$1,260 46	358,723 22	343,311 01		$15,412 21
Deduct repayments					1,260 46		
Actual expenditures					342,050 55		
ERECTION OF MONUMENTS.							
Erection of monumental column at Yorktown, Va	94,912 10			94,912 10	13,520 24		81,391 86
Monument to commemorate the battle of Monmouth, N. J		20,000 00		20,000 00			20,000 00
Monument at Washington's headquarters at Newburg, N. Y		25,000 00		25,000 00	500 00		24,500 00
Pedestalfor statue of Rear-Admiral S. F. Du Pont, U. S. N		10,000 00		10,000 00	4,000 00		6,000 00
	94,912 10	55,000 00		149,912 10	18,020 24		131,891 86
					4,156,824 38		
Deduct repayments					2,087 52		
Total miscellaneous objects	450,039 90	4,784,554 30	2,087 52	5,236,681 72	4,154,736 86	$52,363 38	1,027,493 96

RECAPITULATION.

Salaries, contingent expenses, and postage	56,574 46	2,235,255 31		2,291,829 77	2,146,005 10	8,859 55	136,965 12
Military establishment—Army and Military Academy	1,612,533 37	29,544,689 20		31,157,222 57	27,830,976 15	796,967 47	2,529,278 95
Public works	5,733,535 22	23,258,230 63	1,656 58	28,993,422 43	15,659,337 31	149,431 28	13,182,997 26
Miscellaneous objects	450,039 90	4,784,554 30	2,087 52	5,236,681 72	4,154,736 86	52,363 38	1,027,493 96
Total	7,852,682 95	59,822,729 44	3,744 10	67,679,156 49	49,791,055 42	1,007,621 68	16,876,735 29

REPORT OF THE GENERAL OF THE ARMY.

REPORT

OF

THE GENERAL OF THE ARMY.

HEADQUARTERS ARMY OF THE UNITED STATES,
Washington, D. C., October 27, 1883.

SIR: I now have the honor to make this my last annual report.

Preliminary thereto, I submit the annual reports of the Adjutant and Inspector Generals (the only heads of Bureaus who report direct to the General-in-Chief) and of the commanding generals of the three divisions into which the territory of the United States is divided, with the reports of the several department commanders, who occupy the same relation to the former that a brigadier holds to a division commander of an army in the field. These are grouped as follows:

1st. Report of Adjutant-General Drum, inclosing the usual tables, "organization of the Army," "actual strength of the Army," "distribution of the troops," "list of existing military divisions, departments, and posts," "casualties," "assignment of recruits," &c.

2d. Report of Inspector-General Sacket.

3d. Report of Lieutenant-General Sheridan, of the Division of the Missouri.

3 A.—Report of Brigadier-General Terry, of the Department of Dakota, with sub-report of Col. T. H. Ruger, of the District of Montana.

3 B.—Report of Brigadier-General Howard, of the Department of the Platte.

3 C.—Report of Major-General Pope, of the Department of the Missouri, with sub-report of Brigadier-General Mackenzie, of the District of New Mexico.

3 D.—Report of Brigadier-General Augur, of the Department of Texas.

4th. Report of Major-General Hancock, of the Division of the Atlantic, and of the Department of the East.

4 A.—Report of Col. H. J. Hunt, Fifth Artillery, of the Department of the South.

5th. Report of Major-General Schofield, of the Division of the Pacific, and of the Department of California.

5 A.—Report of Brigadier-General Crook, of the Department of Arizona.

5 B.—Report of Colonel and Brevet Major-General Wheaton, of the Department of the Columbia.

From these reports it will appear that the Army consists of 25,478 aggregate, as follows:

	Officers.	Men.
General	11	
General staff	561	1,186
Ten regiments of cavalry	429	6,811
Five regiments of artillery	280	2,410
Twenty-five regiments of infantry	861	10,555
Indian scouts		210
Detachments	1	2,163
Aggregate	2,143	23,335

These figures are almost identical with those of last year, and the current of military events during the same period has been of the most peaceful character. Nothing has occurred to disturb the rapid development of the great West, which is now completely open to the immigrant in regions where a few years ago no single man could go with safety. There have been no wars or "rumors of wars" in any of the Territories of the United States, with the single exception of Arizona, and even there the hostiles belonged to our neighbor, Mexico. General Crook, in order to reach the source of trouble, had, with the consent of the Mexican authorities, to go 200 miles into Mexico to strike the Apaches in their mountain fastness, which he did with success. I invite special attention to his report, because I think he has touched, with a master's hand, the cause of the conflicts with our Indian foes, and I believe that if he be permitted to manage the Apaches in his own way all wars will cease in Arizona, and with them will disappear the complicated Indian question which has tested the patience and courage of our people ever since the first settlement by whites on this continent.

During this time of profound peace the military authorities have given their best thoughts to "military education" and to "target practice;" and in this connection, out of a large mass of reports, I have selected for printing and general reference the following:

6th. Report of Colonel and Brevet Major-General Merritt, of the Military Academy, West Point, New York.

7th. Report of Maj. L. L. Livingston, Fourth United States Artillery, of the Artillery School at Fort Monroe, Virginia.

8th. Report of Col. E. S. Otis, Twentieth United States Infantry, of the School of Instruction for Cavalry and Infantry at Fort Leavenworth, Kansas.

These cover the whole ground of military education, from the boy appointed as a cadet to the thorough officer of the several arms of service; and I am convinced, after having seen many of the most celebrated military schools of the world, that ours are among the best, and are well adapted to the character of our people and institutions. The Military Academy at West Point is the creation of law—is rather a Congressional school than military. Each cadet represents a member of Congress, or rather a Congressional district, with the exception of the ten appointed at large; and the cadet only comes into the Army proper after his graduation, and after being commissioned as an officer. Yet, whilst undergoing instruction, the Corps of Cadets is subject to military law and discipline, and thus becomes an integral part of the Army of the United States. The education imparted at West Point always has been and must continue to be preliminary—that is, common to the whole human race—calculated to prepare them for the work of

life, whether it be military or civil, such as mathematics, language, chemistry, natural philosophy, &c.; so that a cadet may graduate at West Point and yet not be familiar with the knowledge indispensable to feed, clothe, manage, and fight a company or a regiment, which are the ultimate objects of all Army education, and, therefore, the practical schools at Forts Monroe and Leavenworth have been found most advantageous, even for cadets who have graduated with honor at West Point. The school at Fort Monroe is *special* for the artillery, and is as necessary to the Army as a separate special training is for a surgeon, for a lawyer, for an engineer of a ship, or for one who manages a railroad train; and I am convinced that by the simple instrumentality of this admirably conducted school we now have secured a trained body of artillery officers capable of handling with skill the most massive and complicated of modern artillery, and able to continue the instruction for all time to come.

By mounting and equipping two batteries instead of one to each regiment of artillery, as accomplished by General Orders No. 96, Headquarters of the Army, of 1882, we doubled our capacity for instruction in that most useful and captivating branch of the military service.

In like manner the school recently established at Fort Leavenworth for cavalry and infantry is designed and calculated to give more perfect instruction in these most essential branches of the military service. This school is for commissioned officers of the Army, temporarily detailed away from their proper companies, without any increased pay or allowances, adding not a cent to the annual estimates, yet calculated to prepare the junior officers for the highest sphere of military life.

In times of peace we are all apt to forget that war is ever liable to occur, and I only wish in this connection to remind many a man now living of the sudden call in 1861 for military knowledge. We now possess three admirable schools, well located, well managed, which fulfill that purpose in an eminent degree, and I bespeak for them your ardent support and encouragement. They need nothing else.

The report of the Adjutant-General, herewith, does not show the same satisfactory condition of the "post schools" for enlisted men and soldiers' children at the various military stations. Indeed, since the passage of the law substantially abolishing "camp women," the number of soldiers' children has largely diminished, so that there is no urgent call for such schools; and after an enlisted man has learned to read, with few exceptions, he is content with the advantages of the post libraries, which contain the usual supply of histories, novels, magazines, and newspapers. Grown men, such as compose our ranks, do not want to subject themselves to the average pedagogue, and schools for the enlisted men must be voluntary. The reading-rooms at all our frontier posts are most creditable, and are well patronized.

So with target practice and the usual athletic games, good progress is reported everywhere, and so far as they have fallen under my observation they are admirably conducted, calling for no changes in the present methods.

I now regard the Indians as substantially eliminated from the problem of the Army. There may be spasmodic and temporary alarms, but such Indian wars as have hitherto disturbed the public peace and tranquillity are not probable. The Army has been a large factor in producing this result, but it is not the only one. Immigration and the occupation by industrious farmers and miners of lands vacated by the aborigines have been largely instrumental to that end, but the *railroad*

which used to follow in the rear now goes forward with the picket-line in the great battle of civilization with barbarism, and has become the *greater* cause. I have in former reports, for the past fifteen years, treated of this matter, and now, on the eve of withdrawing from active participation in public affairs, I beg to emphasize much which I have spoken and written heretofore. The recent completion of the last of the four great transcontinental lines of railway has settled forever the Indian question, the Army question, and many others which have hitherto troubled the country. I did intend, before retirement, to sketch out my own experience and knowledge of this most interesting and important subject, and with this end in view I determined, last spring, to cross the continent, westward, substantially by the great lakes and by the line of the Northern Pacific Railway, to return by that along the thirty-fifth parallel, having in previous years traversed the country by every other known route. I started on the 20th of June and traveled till the 8th of October, having along, with others, my aide-de-camp, Col. J. C. Tidball, of the artillery, who took careful notes, and whose report herewith, marked 9, is more full and satisfactory than any I can possibly reproduce from memory. Also, before starting, I instructed my aide-de-camp, Col. O. M. Poe, of the Engineer Corps, to rake among the public archives for a condensed, yet accurate, history of the conception, rise, progress, and completion of these transcontinental roads for my use on return. His report, herewith, marked 10, is also so complete and condensed that I beg to submit it entire, to be construed as part of my own report, better arranged than any I can do myself, and to it I invite your special attention. I regard the building of these railroads as the most important event of modern times, and believe that they account fully for the peace and good order which now prevail throughout our country, and for the extraordinary prosperity whic now prevails in this land. A vast domain, equal to two-thirds of the whole surface of the United States, has thus been made accessible to the immigrant, and, in a military sense, our troops may be assembled at strategic points and sent promptly to the places of disturbance, checking disorders in the bud.

Railroads, however, are instrumentalities rather than substantial causes. They are easily broken and interrupted, because a single man, from malice or enmity, may in a minute displace a rail, move a switch, or fire a bridge, which will require a week or month to repair, interrupting all travel. They require a station, with sidings, every ten miles, water-stations at convenient and short intervals, and costly repair-shops every hundred miles. These constantly call for the protection of the military usually posted on or near the lines. Whilst these roads enable us to send soldiers to threatened points at the rate of five hundred miles a day, thus overcoming the space in one day which used to require a full month of painful marching, these soldiers must in advance be thoroughly organized, equipped, provided and instructed beforehand, because they must be ready for action the moment they reach their destination. It is then too late for preparation, so that the necessity for trained soldiers in advance of the call is rather increased than diminished by these modern developments.

I therefore renew the recommendation of last year, as contained in my letter to you of October 16, 1882, that the strategic points therein named shall be adequately enlarged, with permanent barracks, so as to accommodate suitable garrisons, and that all minor places be abandoned by the military. This will in the end result in economy as well as efficiency. I admit that there exists a tendency to extravagance on

the part of the military as well as of the civil agents of the United States; but the day is past when a soldier will be content to live in "dug-outs," on "his pound of bread, pound of meat, and gill of whisky" per day, whilst the farmer, mechanic, and laboring man alongside has a good house, with coffee, sugar, vegetables, and a well-provided table. We must now treat the soldier as a fellow-man. Let him live as his neighbor, with similar comforts, and he will respond to the call of duty even to the death, as of old. I believe, with General Augur, that there has been a good deal of "loose talk" about over-working the soldiers. I have recently seen them work cheerfully at Cœur d'Alene and Spokane side by side with the civil mechanics, on the same scaffold. The soldier in America should be paid in comparison with his neighbors, and not according to the scale of foreign armies, about which he knows nothing and cares less. He is willing to abide by his contract of enlistment, provided he receives extra pay proportioned to the extra work imposed on him when employed on labor not military, and the price for this extra labor should be proportioned to its value on the spot. The local quartermaster, subject to the discretion of the department commander, under rules prescribed by the Secretary of War, can fix the value of this labor better than any other person. The law should define what kind of labor is to be paid for, because every soldier should build his own bivouac and house his own provisions; but when employed as a carpenter, mechanic, or laborer, on roads, bridges, or buildings of a permanent nature, it is only fair that he should be paid for such labor, or at least receive a credit for it to be paid on his final discharge. This would remove all the clamor about making our soldiers a body of cheap workmen, and take away the alleged excuse for desertion. I am satisfied, from personal observation, that the condition of the soldier to-day is far better than it was in 1846, and that each year it improves by the increased mail facilities, better quarters, better food, and better treatment.

In this report I have purposely abstained from making any recommendations for the future, other than renewing such as had been made in former reports, because on the 1st day of November, at my own request, I will be permitted to transfer the command of the Army to my successor, Lieutenant-General Sheridan, with ample time for him to make such recommendations as he may deem wise and necessary for the action of the next Congress. On the 8th day of February, 1884, I will attain the limit of age fixed by Congress for military service in the Army, and I purposely asked of the President the privilege of anticipating this date to enable my successor to make such recommendations as he may deem necessary; but before leaving I beg to record an expression of opinion that it will be found wise to provide a common organization for all arms of the service, viz: That each regiment of infantry be composed of twelve companies, the same as now with the artillery and cavalry, making three battalions, each of four companies in time of peace, and of eight in time of war; that each company shall have a hundred men; and that in time of peace two of these battalions (eight companies) shall be maintained on a perfect war footing, whilst the other battalion (four companies) may be a mere skeleton, with its complement of officers, and used as a nucleus for recruits. In this battalion can be placed the officers and soldiers invalided by hard service or by sickness, and such as are not yet weaned of home influence or family importunity.

Were such an organization (thus briefly sketched, but more elaborately described in former reports) to be sanctioned by Congress, the

military peace establishment could, I believe, be maintained on the present estimates, and would possess the inestimable advantage of admitting of an increase without "disorder or confusion" to 6,000 artillery, 12,000 cavalry, and 30,000 infantry by the mere scratch of a pen and the magic wand of money; and afterwards by doubling the enlisted strength of each company without the further addition of a single officer we should have the respectable force of 96,000 men, a force large enough for any probable necessity during the remainder of this century.

The militia and volunteers of the States would soon follow suit, and we should have throughout the country these small handy battalions of four companies instead of the large cumbersome regiments of ten companies—a bad tactical unit, and in practice always scattered.

I also do believe Congress should make provision for the transfer of regiments from remote stations to home stations after a fair detail or period of service fixed by law, just as the English Government does. For instance, the 21st Infantry has been on the Pacific coast fourteen years, and ought to come in, but there is no money to pay the cost. Justice and fair dealing are qualities which are of universal application, and I am sure that Congress, on a fair showing, will not withhold the means of transportation, especially now when the Treasury is groaning under a surplus revenue, caused, in part, by the conduct of the very men who appeal to them; for I honestly believe the Army of the United States has in the past fifteen years protected, defended, and encouraged the building of its transcontinental railroads and the settlement of the great West, which are the chief causes of the great prosperity which now blesses our land.

Thanking you for past and present courtesies, I am, with great respect, your obedient servant,

W. T. SHERMAN,
General.

Hon. ROBERT T. LINCOLN,
Secretary of War.

REPORTS TO THE GENERAL OF THE ARMY.

1.—ANNUAL REPORT OF THE ADJUTANT-GENERAL TO THE GENERAL OF THE ARMY.

HEADQUARTERS OF THE ARMY,
ADJUTANT-GENERAL'S OFFICE,
Washington, October 00, 1883.

GENERAL: Pursuant to your instructions, I have the honor to submit the annual returns of the Army:

A.—Organization of the Regular Army.

B.—Return showing actual strength of the Regular Army.

C.—Distribution of troops in the Departments of the Missouri, Texas, the Platte, and Dakota—Division of the Missouri.

D.—Distribution of troops in the Departments of the East and South—Division of the Atlantic.

E.—Distribution of troops in the Departments of California, the Columbia, and Arizona—Division of the Pacific.

F.—Military geographical divisions, departments, and posts, with distribution of troops, post-offices, telegraph stations, and nearest railroad stations or boat landings.

G.—Statement of casualties during the fiscal year ending June 30, 1883.

H.—Statement of the number of trials of enlisted men by general courts-martial during the fiscal year ending June 30, 1883.

I.—Statement of assignments of recruits and re-enlistments during the fiscal year ending June 30, 1883.

The number of enlisted men now in the service who are drawing increased pay under act of Congress of August 4, 1854, is as follows:

Five years' continuous service	3,355
Ten years' continuous service	1,789
Fifteen years' continuous service	796
Twenty years' continuous service	105
Twenty-five years' continuous service	99
Thirty years' continuous service	50
Total	6,194

The number of those who will become entitled to increased pay under act of Congress of May 15, 1872, during the fiscal year ending June 30, 1885, is—

Re-enlisted pay	554
One dollar per month for third year of service	5,398
Two dollars per month for fourth year of service	3,647
Three dollars per month for fifth year of service	2,478
Total	12,077

and the number of enlisted men in service whose terms will expire during the same fiscal year is 3,490.

A comparison of the data contained in the several tables submitted with those in the tables accompanying my last report shows but little alteration. The number of men who have served from ten to thirty years is 2,839, and of the 22,851 men on the rolls of the Army June 30, 1883, over 40 per cent. had served four or more years.

Under present law, men who have honorably completed their term of service are granted increased pay provided they re-enlist within thirty days from date of discharge. While its provisions secures to the Army the services of many good men, I am of opinion that its amendment making increased pay contingent on immediate re-enlistment of the men in *their own regiment*, and granting them a furlough of thirty, sixty, or ninety days, according to the length of previous service, would prove vastly beneficial in fostering *esprit de corps*, the very life of military organizations.

The importance of the subject of desertion, and the absolute necessity, looking to intelligent and active remedial action, of determining the probable causes which led men to desert the service, resulted in the issue of a regulation ordering boards of survey to be convened whenever a desertion took place, for the purpose of determining the attendant circumstances, and especially the real or alleged cause. An analysis of the special reports received from the several military headquarters is submitted under the head of "desertion," and I beg to invite your attention to it, and to the proposed remedial measures which, it is thought, will best insure the reduction of this most serious military crime.

DESERTION.

I beg to submit the following synopsis of the reports received from the several military departments:

DEPARTMENT OF ARIZONA.

Total number of desertions, 204.

Reasons assigned by boards.—Bad character, 29; drunken and dissipated habits, 12; dissatisfaction, 28; desire to obtain better wages, 9; home influences, 12; and enlisted to go west, 13.

The department commander, after review of reports, indicates the following causes and submits remedies as follows:

Causes.—Too much manual labor, which, at present, it is impossible to remedy; from scarcity and high price of vegetables in the Territory the ration is possibly less than is needed; and men enlisting for the purpose of securing free transportation to the west.

Remedies.—Increase of punishment for desertion and of reward paid for apprehension; low estimate in which soldiers are held in civil communities to be remedied by raising character of the service; appointments in the Army to be absolutely limited to the Military Academy and the ranks.

DEPARTMENT OF THE EAST.

Total number of deserters, 180. Nativities: United States, 85; foreign countries, 63; and unknown, 32. Seventy of the deserters bore a good character prior to their offense, and 23 ranged from bad to utterly worthless. Number of desertions within 6 months of enlistment, 54; in first year of service, 91; second year of service, 42; third year of service, 17; fourth year of service, 1; and service not given, 29.

Causes.—Intemperance, restlessness, and discontent; marriage with

Canadian women on the part of men at frontier posts and facility and security in desertion into Canada.

Remedies.—Change in present system of clothing accountability—a serious cause of discontent, especially to recruits; inducements that will make men take up the military service as a career instead of a make-shift; higher pay for non-commissioned officers, who are, or certainly should be, not only soldiers of long and faithful service, but also possessed of good military qualifications and a fair general education; finally, above all these, there should be a liberal pension allowance, to enable men who have given to the service their days of usefulness to live decently in their declining years, and keep them out of the almshouse.

DEPARTMENT OF THE MISSOURI.

Total number of deserters, 423.

Reasons assigned by boards.—Indebted to the Government, 240; prior trials by courts-martial, 65; recaptured, 43; tried for desertions but acquitted, 5; drunken and dissipated habits, 20; dissatisfaction, 42; and to obtain better wages, 37.

Thirty-four of the deserters possessed good characters, 22 bad, and 19 were reported utterly worthless.

Number of desertions in first year of service, 281; second year of service, 103; third year of service, 17; fourth year of service, 2; and after serving one or more terms, 20. Four of the desertions among old soldiers resulted from embezzlement of public property, and three from incorrigible habits of dissipation.

While the cause is laid to a faulty system of recruiting, no remedy is indicated.

DEPARTMENT OF THE PLATTE.

Total number of deserters, 210.

Two hundred and twelve boards of survey were held, but in two cases the men were not considered guilty of desertion, leaving the number of deserters as above. While in more than half the cases the boards could not discover any assignable cause, in others the reason found is: Fear of recognition as deserters, 10; dissatisfaction, 26; enlisted to go west, 10; drunken and dissipated habits, 12; and desire to obtain higher wages, 4.

Remedies.—Higher reward for apprehension of deserters and more severe punishment for the crime; fraudulent enlistments to be punishable by court-martial; marking of deserters; privilege granted absentees to surrender within one month, with assurance of trial for absence without leave only; first term of service limited to three years; re-enlistment to be for two or three years, and all subsequent re-enlistments to be for one or two years; no reason is seen why, as done in the British service, the Government should not grant a man his discharge on repayment of expenses of enlistment, or a fixed sum, say $100.

Examination of reports indicate that 90 per cent. of the desertions took place within the first two years of service, and 65 per cent. in the first.

DEPARTMENT OF THE SOUTH.

Total number of deserters, 67.

Number of desertions within six months of enlistment, 43; in first year of service, 52; second year of service, 7; third year of service, 4; fourth year of service, 2; and after serving one or more terms, 2.

In more than one-half the cases the boards were unable to assign any sufficient reason for the desertions.

Causes.—Discontent and recklessness, coupled with hard work and severe duty; lack of restraining moral influence to prevent a discontented man from deserting; small esteem in our communities for the position of a soldier, the bad conduct of a small percentage of the men confirming the ill-feeling towards the whole of them, to the disgust of the large body of good men; deficency and lack of variety in food.

Remedies.—More frequent payments would diminish the evil; in time of peace deserters to be tried by civil courts, and legal punishment, on conviction, to be imprisonment in a penitentiary. This mode of dealing with deserters would tend materially to change the views of the community about deserters. First term of service to be shortened; second and subsequent engagements not recognized as re-enlistments unless made within sixty days in the same regiment; increase pay of non-commissioned officers, opening to soldiers a reasonable prospect of substantial advantage as the reward of good service; regimental commanders to be empowered to purify their commands by summary discharge of disreputable or worthless characters; careful regulation of power of confining men in the guard-house; change of present mode of settling clothing accounts—at present a fruitful source of discontent; laundresses should be restored and a certain proportion of the men allowed to marry. If company commanders are careful about their laundresses, the presence of the latter is in every way beneficial. There are more married men under present system than before its adoption, and on a change of station the men have to desert either their families or the service.

DEPARTMENT OF TEXAS.

Total number of deserters, 325, or 13.36 per cent. of mean strength of command. Nativities: United States 206, and foreign countries 86. Rank: Sergeants, 6; corporals, 4; and privates, 282.

Forty of the above number surrendered or were apprehended.

The probable causes reported by boards of survey in 185 cases are: Dissatisfaction, 49; to get higher wages, 15; general worthlessness and dissipation, 11; to escape trial, 1; and tramps when enlisted, 11.

Number of desertions within six months of enlistment, 145; in first year of service, 212; second year of service, 43; third year of service, 17; fourth year of service, 7; and after serving one or more terms, 14. Tried by court-martial: Once, 38; twice, 21; three or more times, 23; and never tried, 211.

Two hundred men deserted within ten days after date of payment.

The large number of desertions within six months after joining companies seems to afford proof for the assertion that more than one-third of the deserters enlisted during the winter months, merely to obtain food, shelter, raiment, and transportation from our crowded cities to a new field. The great demand for labor on railroads and the absolute security from arrest after crossing the Rio Grande, and almost within sight of the military post, is seemingly and irremediable cause.

ENGINEER CORPS.

Total number of deserters (Willets Point, N. Y.), 13.

No cause is assigned in 8 cases; 3 are reported due to intemperance, and 2 to the men having married prior to enlistment.

Suggestion is made that more care be exercised to prevent enlistment of intemperate or married men.

MOUNTED RECRUITING SERVICE, JEFFERSON BARRACKS, MISSOURI.

The principal causes of desertion are ascribed to: 1st, dissatisfaction with army life and its restraints; 2d, to the notorious unhealthiness of the station; and 3d, to a desire to secure transportation to the far west. The remedy suggested is a more rigorous punishment for desertion.

GENERAL RECRUITING SERVICE, NEW YORK CITY.

The superintendent is unable to account for desertion on grounds satisfactory to himself, except upon the hypothesis that many men enlist simply with a view to obtaining temporary relief.

In seeking the remedies for this cancerous evil, it must be remembered that desertion, like other crimes, can never be totally eradicated, but may and should be reduced to a minimum. Desertion, by military law, is regarded as one of the most heinous crimes that soldiers can commit, and, in time of war, death is the penalty; unfortunately, however, it is not sufficiently so considered in time of peace, either by the civil law, the people at large, or the soldiers themselves. One great cause of desertion is that the men are taught to believe it not a crime but, at most, a breach of contract, which can be terminated at pleasure or whenever a real or supposed grievance presents itself to their minds. This pernicious doctrine—ignoring the sanctity of the oath taken at enlistment—pervades almost the entire Army.

Disappointment at realistic military life; restlessness under its restraints; desire to obtain higher wages as laborers; the large amount of clothing charged to recruits during the first year of service, especially at depots, from date of enlistment to the time of joining their commands, for which they have to pay before receiving any money from the Government, are some of the principal causes of desertion, and, lastly, but not the least in importance, the fact that, from a deplorable thoughtlessness, company commanders do not always reserve into their hands the active management and supervision of their company, and delegate to non-commissioned officers powers of control that should only be exercised by themselves. In this connection I beg to recommend that stringent orders be issued—preferably in the form of a regulation—prohibiting the confinement of men in the guard-house by non-commissioned officers except for the offense of disturbance in quarters. No man should be confined, particularly those guilty only of minor offenses, until after full inquiry has been made by the company or the post commander into the cause of offense. At many of the posts men who have offended trivially are confined in the prison-room occupied by general prisoners—the worst element in the Army. This, in my judgment, should be absolutely prohibited.

There is scarcely a doubt that the absence of captains from their companies, for long periods, leads to much discontent on the part of the men. There are, at present, one hundred and two captains of the line absent from their appropriate commands (thirty-one from the cavalry, eight from the artillery, and sixty-three from the infantry), or nearly twenty-four per cent. of the whole number of line officers of that grade.

In addition to the above important recommendation on the subject of the exercise of arbitrary power on the part of non-commissioned officers, I beg to suggest:

First. The first term of service to be fixed at three years. Over one-half of the desertions take place during the first year or eighteen months of

service. Necessity forces the assignment of recruits to regiments after too short a stay at the depot to determine their fitness for the Army. Inaptness for military life, discontent, homesickness, &c., render many men restless at the prospect of five long years of a service for which they are not fitted, and induces them to seek relief through desertion, while, could they realize that but a comparatively short time is to elapse before their discharge, they would hesitate to forfeit the advantages (retained pay, transportation, &c.) accruing to them at the end of their term of service.

Second. Bimonthly settlement of clothing. The present system, although in accordance with existing law, works great hardship to the recruit or young soldier, and is, undoubtedly, a fruitful cause of desertion. The cost, about fifty dollars, of the first outfit furnished a recruit should be proportionally deducted each month, a final settlement being made at the end of the year.

Third. Reduction of the amount of manual labor imposed on the men. This labor, of course, is not meant to include purely military duty.

While—underlying all grievances—the cause of desertion is primarily to be found in the low moral standard of offenders, I believe the above recommendations, looking to the removal of the causes of discontent, will, if carried out, prove of much efficacy in checking the commission of this crime.

EDUCATION IN THE ARMY.

This subject is one of deep solicitude to all interested in the furtherance of the best interests of the service, whether viewing its immediate benefits to the ranks or its future advantageous results when the men who now fill the Army are restored to the full exercise of the privileges of citizens. Reserving the expression of my views on the subject at present, I have the honor to submit a synopsis of the several reports received during the past year.

DEPARTMENT OF ARIZONA.

Number of post schools, 6. School attendance: Enlisted men, 38; children of officers, 10; children of enlisted men, 17; and children of civilians, 11.

There was no neglect on the part of post commanders, but the numerous calls for troops for field service have practically closed the schools during the greater part of the year.

DEPARTMENT OF CALIFORNIA.

Number of post schools, 11; average strength of garrisons, 848; and average number of children over five years, 112. School attendance: Enlisted men, 20, and children of officers, 41.

Teachers, school-rooms, and school-books are provided at all posts in the department; school-rooms and books are sufficient and in good order; no neglect appears on the part of post commanders to take proper interest in this important part of their duties.

DEPARTMENT OF DAKOTA.

Number of post schools, 21; average strength of garrisons, 4,041; and number of children over five years, 331. School attendance: Enlisted

men, 183; children of officers, 63; children of enlisted men, 147; and children of civilians, 86.

The school-houses and school-books are reported, generally, in good condition.

The schools for enlisted men have not prospered during the past years as much as was hoped, partly owing to lack of good teachers and in part from the amount of work required from the men under reduced appropriations. The inadequacy of the lights allowed for the evening school for enlisted men is a serious drawback which should be remedied.

DEPARTMENT OF THE EAST.

Number of post schools, 15.

The progress, as a rule, has not been great, owing to a general want of competent teachers, and attendance being optional.

DEPARTMENT OF THE MISSOURI.

Number of post schools, 21; average strength of garrisons, 3,789; and average number of children over five years, 342. School attendance: Enlisted men, 214; children of officers, 42; children of enlisted men, 127; and children of civilians, 57.

The condition of school buildings and school-books is reported as generally good; at some few points there has been no school building, but measures have been taken which will supply the deficiency; there has been no lack of interest on the part of post commanders; in several cases since the close of the last fiscal year schools have been discontinued, owing to the impossibility of paying teachers the *per diem* allowance from the greatly reduced appropriations for "incidental expenses."

DEPARTMENT OF THE PLATTE.

Average strength of garrisons, 2,094. School attendance: Enlisted men, 85; children of officers, 35; and children of enlisted men, 96.

The mode of selecting teachers is considered defective; they should have settled appropriate rank, and, in order to impress intellectual superiority upon their scholars, should know more than they are actually called upon to impart. Attendance at schools should be made compulsory; many officers find it difficult to draw the line between persuasion and compulsion, advice and order.

DEPARTMENT OF THE SOUTH.

Number of post schools, 5. School attendance: Enlisted men, 23; and children, 28.

At small posts the time of the men is so fully occupied that they really have little or no time for school, even if they desired to attend; but it has been found exceptional for an old or even middle-aged soldier to have a desire to study. Considers it a waste of time and money to attempt to maintain schools at posts garrisoned by less than four companies.

DEPARTMENT OF TEXAS.

Number of post schools, 10; average strength of garrisons, 2,040; and average number of children over five years, 263. School attendance; Enlisted men, 99; children of officers, 56; children of enlisted men, 112; and children of civilians, 74.

The school-houses and school-books are reported in good condition. Renews views, heretofore submitted, that under the present system but few really competent teachers can be secured; to become willing pupils the men must recognize the competency of their instructors; attendance should be compulsory; the teachers to be provided by future legislation should be for service at any post where their services may be needed, possess adequate rank, and ought not to form part of a regimental organization; to secure the best possible results, the general charge should rest with the Adjutant-General and his assistants at department headquarters, simplicity of organization being a powerful factor of success; finally, the instruction of enlisted men should be viewed as a military duty, and the school hours be during the period of the day allotted to the performance of duties—after retreat, as now, is not a time when soldiers are inclined to attend school.

The partial failure of the scheme of education in the Army, as evidenced by the comparatively small number of men availing themselves of the advantages offered them, is, I am satisfied, owing in a great measure to faultiness of the present system. Its tendency, as I had the honor to state in my last report, is to create a bureau of military education which is subject to grave objections, and, in other respects, serious defects exist destructive of the hope of reasonable success.

The instruction should be beyond the alphabetical range; attendance at the school must be made part of the military duty of the soldier, and, as a necessary sequence, the hours fixed should be during the time of the day allotted to the performance of duties. Men should be made to realize that in addition to soldierly bearing, full knowledge of military duty and ready obedience and ability in its performance, education will prove an important factor in determining their fitness for appointment to the honorable and responsible position of a non-commissioned officer. On the other hand, teachers must be fully fitted for their position, and combine with the possession of knowledge the capacity to impart it. Their services being for the benefit of the whole Army, they cannot with propriety be members of a company or a regiment, and they must be given suitable rank to insure attention and respect. Soldiers will be slow to obey or respect a teacher whose position in quarters is possibly inferior to theirs, and it is demoralizing in the extreme when they find that their voluntary studies must be relinquished for a time because their instructor (superior to them in acquired knowledge only) is undergoing merited punishment in the guard-house, possibly for drunkenness.

I beg to renew my recommendation that the inspection of the schools be made part of the duties devolving on officers of the Inspector-General's Department, and that these inspections be made special.

RECRUITING SERVICE.

On October 1, 1882, recruiting rendezvous were in operation at the following points: Four in New York City; two in each of the cities of Philadelphia, Baltimore, Chicago, Cincinnati, and Saint Louis; and one, in each, at Boston, Providence (R. I.), Albany, Buffalo, Pittsburgh, Cleveland, Indianapolis, Springfield (Ill.), Detroit, Milwaukee, Davenport (Iowa), and Washington.

In February, 1883, a rendezvous was opened at Harrisburg, Pa., and in May, 1883, one at Kansas City, Mo.

In April, 1883, the rendezvous at Davenport, Iowa, and Springfield,

Ill., were closed and replaced by rendezvous at Rochester, N. Y., and Louisville, Ky.

The rendezvous at Milwaukee, Wis., was closed in April, 1883; it was re-established in August, 1883.

Kansas City, Mo., not proving to be a productive station, the rendezvous there has been recently closed.

During the month of September, 1883, a branch from the Albany rendezvous was opened at Troy, N. Y., and also a branch from one of the Philadelphia rendezvous at Camden, N. J.

During the greater part of the year the recruiting offices in the cities where only one rendezvous has been in operation have been making enlistments for both the general and mounted service, but in September, 1883, recruiting for the mounted service by officers of the general service (except at Washington, D. C.) was restricted to the re-enlistment of applicants presenting themselves within one month from date of discharge from prior service.

Recruiting has also been carried on without expense to the recruiting fund, in all the departments embraced in the Military Divisions of the Missouri and the Pacific by officers stationed at military posts, under the supervision of the assistant adjutant-generals at the headquarters of the several departments. In the Military Division of the Atlantic regimental recruiting has been actively carrried on by recruiting officers at the several posts designated by the regimental commanders.

Every effort was made during the entire fiscal year ending June 30, 1883, to obtain sufficient men to fill the Army to its authorized strength, but notwithstanding these efforts the total enlisted strength of the Army on that date was only 22,851, or 2,149 less than the authorized number.

Since the commencement of the present fiscal year recruiting has progressed satisfactorily.

The two colored regiments of infantry having their proper complement of men, recruiting for them has been recently suspended, except in the cases of applicants who, having honorably served one enlistment (or more), present themselves for re-enlistment within one month from date of discharge.

The total number of enlistments made during the fiscal year ending June 30, 1883, was 8,998 (not including the Signal Corps). Of these, 6,668 were made by officers of the general and mounted recruiting service, and 1,263 by department and engineer recruiting officers. The nativity and occupation of these accepted recruits (7,931 in number) are exhibited in detail in the table marked K, as well as the various causes leading to the rejection of a large number of applicants for enlistment. The remaining enlistments (1,067 in number) were made by regimental recruiting officers, commanding officers of detachments, &c.

The total number of enlistments made during the fiscal year ending June 30, 1883, is, as stated above, 8,998; of the 7,931 accepted recruits, 4,838 were native born, 3,093 of foreign birth, 6,461 white, and 470 colored. The large number of men presenting themselves for enlistment (19,738), who were rejected on account of mental or physical disqualification, evidences that the officers detailed on this important and delicate duty are fully alive to the interests intrusted to their care.

Many men are annually lost to the Army by being sent to regiments too soon after enlistment to acquire any but the most rudimentary knowledge of the service, its duties and restraints. A measure was introduced in the last Congress providing the only remedy to this positive and costly evil. The Committee on Military Affairs adopted my

recommendation that 1,000 men, in excess of the prescribed strength of the Army, be allowed for thorough instruction at the recruiting depots, but the bill introduced in Congress for that purpose failed to become a law from causes extraneous to its merits.

Fully convinced of the advantages that would accrue from the thorough instruction of recruits before their assignment to military organizations, I attempted to carry out the scheme, hampered on one side, however, by the absolute necessity of keeping within the legal limit of the strength of the Army, and on the other by the pressing demands for recruits to fill up depleted commands. The notorious unhealthiness of one of the main depots, added to the above reasons, forced, eventually, the abandonment of a plan which, I am satisfied, is the only true remedy to the evil complained of, by providing efficient additions to the ranks and saving the Government the heavy expense of transporting to numerous distant points men whose entire lack of necessary qualities and aptitude renders them an absolute burden to the Army.

Respectfully submitted.

R. C. DRUM,
Adjutant-General.

	General.	Lieutenant-General.	Major-generals.	Brigadier-generals.
General officers	1	1	3	
Military secretary to the Lieutenant-General				
Aides-de-camp to general officers				
Adjutant-General's Department				
Inspector-General's Department				
Bureau of Military Justice				
Quartermaster's Department				
Subsistence Department				
Medical Department				
Pay Department				
Corps of Engineers				
Ordnance Department				
Signal Corps				
Post chaplains				
First Regiment of Cavalry				
Second Regiment of Cavalry				
Third Regiment of Cavalry				
Fourth Regiment of Cavalry				
Fifth Regiment of Cavalry				
Sixth Regiment of Cavalry				
Seventh Regiment of Cavalry				
Eighth Regiment of Cavalry				
Ninth Regiment of Cavalry				
Tenth Regiment of Cavalry				
Aggregate of cavalry				
First Regiment of Artillery				
Second Regiment of Artillery				
Third Regiment of Artillery				
Fourth Regiment of Artillery				
Fifth Regiment of Artillery				
Aggregate of artillery				
First Regiment of Infantry				
Second Regiment of Infantry				
Third Regiment of Infantry				
Fourth Regiment of Infantry				
Fifth Regiment of Infantry				
Sixth Regiment of Infantry				
Seventh Regiment of Infantry				
Eighth Regiment of Infantry				
Ninth Regiment of Infantry				
Tenth Regiment of Infantry				
Eleventh Regiment of Infantry				
Twelfth Regiment of Infantry				
Thirteenth Regiment of Infantry				
Fourteenth Regiment of Infantry				
Fifteenth Regiment of Infantry				
Sixteenth Regiment of Infantry				
Seventeenth Regiment of Infantry				
Eighteenth Regiment of Infantry				
Nineteenth Regiment of Infantry				
Twentieth Regiment of Infantry				
Twenty-first Regiment of Infantry				
Twenty-second Regiment of Infantry				
Twenty-third Regiment of Infantry				
Twenty-fourth Regiment of Infantry				
Twenty-fifth Regiment of Infantry				
Aggregate of infantry				
Captain in *the Army*				
Non-commissioned staff unattached to regiments				

	Musicians.	Farriers and blacksmiths.	Artificers.	Saddlers.	Wagoners.	Privates, first class.	Privates, second class.	Privates.	Total.	MILITARY ACADEMY. Professors.	Cadets.	Aggregate.
...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
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...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63
...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
...	.....	.....	.....	.....	.....	.....	.....	.....	146	.....	.....	329
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
...	.....	.....	.....	.....	.....	79	60	.....	181	.....	.....	287
...	.....	.....	.....	.....	.....	145	113	.....	375	.....	.....	435
...	.....	.....	.....	.....	.....	221	85	.....	(c)484	.....	.....	493
...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
16	.....	22	.....	11	9	.....	.....	544	721	.....	.....	764
22	.....	24	.....	12	10	.....	.....	521	708	.....	.....	751
16	.....	21	.....	9	8	.....	.....	449	619	.....	.....	662
17	.....	24	.....	11	8	.....	.....	457	639	.....	.....	681
20	.....	22	.....	9	5	.....	.....	462	634	.....	.....	677
17	.....	21	.....	11	5	.....	.....	479	648	.....	.....	691
18	.....	22	.....	10	12	.....	.....	440	623	.....	.....	665
21	.....	23	.....	12	8	.....	.....	526	709	.....	.....	752
24	.....	21	.....	11	2	.....	.....	555	735	.....	.....	779
23	.....	23	.....	10	.....	.....	.....	603	775	.....	.....	818
94	.....	223	.....	106	67	.....	.....	5,036	6,811	.....	.....	7,240
...	19	.....	5	.....	.....	.....	.....	351	485	.....	.....	541
...	22	.....	.....	.....	.....	.....	.....	375	501	.....	.....	557
...	19	.....	9	.....	2	.....	.....	302	440	.....	.....	496
...	20	.....	4	.....	1	.....	.....	358	495	.....	.....	551
...	22	.....	3	.....	1	.....	.....	368	489	.....	.....	545
...	102	.....	21	.....	4	.....	.....	1,754	2,410	.....	.....	2,690
...	18	.....	.....	.....	.....	.....	.....	358	463	.....	.....	497
...	13	.....	2	.....	.....	.....	.....	344	443	.....	.....	477
...	16	.....	2	.....	.....	.....	.....	319	422	.....	.....	457
...	15	.....	3	.....	.....	.....	.....	298	400	.....	.....	435
...	19	.....	7	.....	.....	.....	.....	324	445	.....	.....	480
...	14	.....	6	.....	.....	.....	.....	296	408	.....	.....	442
...	18	.....	3	.....	.....	.....	.....	329	435	.....	.....	469
...	16	.....	.....	.....	.....	.....	.....	301	406	.....	.....	441
...	16	.....	2	.....	1	.....	.....	330	440	.....	.....	474
...	15	.....	5	.....	.....	.....	.....	232	327	.....	.....	361
...	14	.....	3	.....	1	.....	.....	247	348	.....	.....	382
...	14	.....	1	.....	.....	.....	.....	241	339	.....	.....	374
...	15	.....	1	.....	.....	.....	.....	348	452	.....	.....	487
...	17	.....	.....	.....	.....	.....	.....	305	411	.....	.....	445
...	12	.....	2	.....	.....	.....	.....	301	407	.....	.....	442
...	6	.....	8	.....	1	.....	.....	331	430	.....	.....	464
...	19	.....	6	.....	1	.....	.....	302	421	.....	.....	455
...	12	.....	.....	.....	.....	.....	.....	333	432	.....	.....	465
...	12	.....	3	.....	.....	.....	.....	331	433	.....	.....	467
...	19	.....	.....	.....	.....	.....	.....	356	466	.....	.....	501
...	18	.....	.....	.....	.....	.....	.....	339	443	.....	.....	478
...	16	.....	3	.....	.....	.....	.....	302	405	.....	.....	440
	18	.....	4	.....	.....	.....	.....	321	436	.....	.....	471
	'6	.....	.....	.....	.....	.....	.....	364	471	.....	.....	505
	)	.....	.....	.....	.....	.....	.....	366	472	.....	.....	507
		.....	61	.....	4	.....	.....	7,918	10,555	.....	.....	11,416
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
									248			242

C.—*Position and distribution of troops in the Military Division of the Missouri, commanded returns on file in the Adju*

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
DEPARTMENT OF THE MISSOURI.				Divis'n Staff.	1	1	2	1	1	..
Headquarters.....	Fort Leavenworth, Kans.	Maj. Gen. John Pope....	...	Department staff.	1	..	2	1	..	1
Headquarters District of New Mexico.	Santa Fé, N. M.....	Brig. Gen. R. S. Mackenzie.	...	District staff	1	..	2	..	..	..
Fort Bayard, N. M.	Near Pinos Altos	Col. W. B. Royall, 4th Cav.	4	4th Cav. and 23d Inf.	..	..	..	..	..	..
Fort Craig, N. M...	3 miles from San Marcial.	Lt. Col. H. M. Lazelle, 23d Inf.	3	4th Cav. and 23d Inf.	..	..	..	..	..	..
Fort Cummings, N. M.	At Cook's Springs....	Lieut. Col. G. A. Forsyth, 4th Cav.	4	4th Cav. and 13th Inf.	..	..	..	..	..	..
Fort Marcy, N. M..	At Santa Fé	Capt. C. J. Dickey, 22d Inf.	1	22d Inf.....	..	..	..	..	..	..
Fort Selden, N. M..	Near Dona Ana.....	Capt. P. H. Ellis, 13th Inf.	1	13th Inf.....	..	..	..	..	..	..
Fort Stanton, N. M.	On the Rio Bonita	Maj. J. J. Van Horn, 13th Inf.	5	4th Cav. and 13th Inf.	..	..	..	..	..	..
Fort Union, N. M..	5 miles from the Moro.	Col. H. M. Black, 23d Inf.	4	23d Inf.....	..	..	..	..	..	..
Fort Wingate, N.M.	Near Wingate Station.	Col. L. P. Bradley, 13th Inf.	7	4th Cav. and 13th Inf.	..	..	..	..	..	..
Fort Garland, Colo.	On the line of the Denver and Rio Grande Railroad.	Capt. J. B. Irvine, 22d Inf.	1	22d Inf.....	..	..	..	..	..	..
Fort Lyon, Colo....	Near Las Animas.....	Lt. Col. N. A. M. Dudley, 9th Cav.	4	9th Cav. and 22d Inf.	..	..	..	..	..	..
Fort Lewis, Colo...	Near the Rio La Plata.	Col. D. S. Stanley, 22d Inf.	5	22d Inf.....	..	..	..	..	..	..
Cantonment on the Uncompahgre, Colo.	79 miles from Gunnison.	Lt. Col. Henry Douglas, 14th Inf.	4	14th Inf.....	..	..	..	..	..	..
Fort Elliott, Tex...	On Sweetwater Creek.	Major R. F. O'Beirne, 24th Inf.	4	9th Cav. and 24th Inf.	..	..	..	..	..	..
Fort Bliss, Tex	Near El Paso	Maj. J. S. Fletcher, jr., 23d Inf.	2	23d Inf.....	..	..	..	..	..	..
Fort Hays, Kans...	Near Hays City.....	Lt. Col. C. R. Layton, 20th Inf.	3	9th Cav. and 20th Inf.	..	..	..	..	..	..
Fort Leavenworth, Kans.	Near Leavenworth City.	Col. E. S. Otis, 20th Inf..	10	3d, 4th, 7th, & 8th Cav.; 2d Art.; 1st, 4th, 11th, & 20th Inf.	..	..	..	..	..	..
Leavenworth Military Prison, Kans.	At Fort Leavenworth.	Capt. A. P. Blunt, Q. M. Dep't.	...	Prison guard	..	..	..	..	..	..
Fort Riley, Kans ..	Near Junction City...	Col. Edward Hatch, 9th Cav.	4	9th Cav	..	..	..	..	..	..
Fort Reno, Ind. T..	Near Cheyenne Agency.	Maj. T. B. Dewees, 9th Cav.	5	9th Cav., 20th & 23d Inf.	..	..	..	..	..	..
Fort Sill, Ind. T....	On Medicine Bluff Creek.	Maj. G. V. Henry, 9th Cav.	7	9th Cav. and 24th Inf.	..	..	..	..	..	..
Fort Supply, Ind. T.	Near junction of Wolf and Beaver Creeks.	Col. J. H. Potter, 24th Inf.	5	9th Cav., 20th & 24th Inf.	..	..	..	..	..	..
Fort Gibson, Ind. T.	8 miles from Muskogee.	Maj. J. C. Bates, 20th Inf.	2	20th Inf.....	..	..	..	..	..	..
Total.....	.....	.....	85	.....	2	..	4	1	..	1

by Lieutenant-General P. H. Sheridan, headquarters Chicago, Ill., taken from the latest tant-General's Office, 1883.

PRESENT.																				ABSENT.							AGGREGATE.		
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and reg'tal staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
2	3	1	1	1	..	..	1	..	1	..	..	..	..	..	..	14	16	30	..	..	..	..	..	..	..	16	14	30
3	1	2	4	1	..	..	..	..	..	1	..	..	..	..	..	13	17	30	..	..	..	..	..	..	..	17	13	30
1	1	1	2	..	..	..	..	..	..	..	1	..	..	..	..	8	9	17	..	..	..	..	..	..	..	9	8	17
..	..	2	..	..	..	..	..	1	..	1	3	..	1	1	7	213	16	229	..	1	2	1	6	4	10	20	219	239
..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	6	136	9	145	..	..	1	..	1	1	2	10	137	147
..	..	1	..	..	..	..	..	..	1	..	2	..	..	..	5	184	9	193	..	..	1	2	..	3	3	12	184	196
..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	46	3	49	..	..	..	..	1	..	1	3	47	50
..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	39	2	41	..	..	1	..	..	1	1	3	39	42
..	..	1	..	..	..	..	..	..	..	1	3	..	..	..	6	255	11	266	..	..	1	2	..	3	3	14	255	269
1	..	1	..	..	..	1	..	1	..	..	4	..	1	1	7	195	17	212	..	..	..	1	4	1	5	18	199	217
..	..	1	..	..	..	..	..	1	1	1	5	..	1	1	10	357	21	378	..	..	2	3	2	5	7	26	359	385
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	2	43	4	47	..	..	..	..	..	..	..	4	43	47
..	..	1	..	..	..	..	..	..	1	..	2	..	..	..	7	172	11	183	..	..	2	..	3	2	5	13	175	188
..	..	2	..	..	..	..	..	1	..	1	4	..	1	1	8	186	18	204	..	1	1	1	3	3	6	21	189	210
..	..	..	..	..	..	..	..	..	1	..	4	..	..	..	8	154	13	167	..	..	..	..	4	..	4	13	158	171
..	..	1	..	..	..	..	..	..	..	1	4	..	..	..	7	179	13	192	..	..	..	1	2	1	3	14	181	195
..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	3	90	6	96	..	..	1	1	2	2	4	8	92	100
..	..	1	..	..	..	..	..	..	1	..	3	..	..	..	5	129	10	139	..	..	..	1	..	1	1	11	129	140
..	..	2	..	..	..	1	..	1	..	3	8	..	1	1	55	532	72	604	..	..	2	1	7	3	10	75	539	614
1	..	1	..	..	..	1	..	..	..	..	1	..	..	..	3	92	7	99	..	..	..	..	2	..	2	7	94	101
..	..	1	..	..	..	..	..	1	..	1	4	..	1	1	6	253	15	268	..	..	..	1	2	1	3	16	255	271
..	..	1	..	..	..	..	..	..	..	1	3	..	..	..	8	252	13	265	..	..	2	2	3	4	7	17	255	272
..	..	1	..	..	..	1	..	..	..	1	5	..	..	..	11	344	19	363	..	..	2	2	1	4	5	23	345	368
..	..	1	..	..	..	..	..	1	..	..	4	1	1	1	9	268	18	286	..	..	1	..	2	1	3	19	270	289
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	3	93	5	98	..	..	2	..	..	2	2	7	93	100
6	4	225	6	1	..	4	..	7	6	14	65	1	7	7	179	4,233	338	4,571	..	2	21	19	45	42	87	380	4,278	4,658

C.—*Position and distribution of troops in the*

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-General.	Bureau of Military Justice.
DEPARTMENT OF TEXAS.										
Headquarters	San Antonio	Brig. Gen. C. C. Augur	...	Department staff.	1	..	1	1	..	..
Fort Brown, Tex	At Brownsville	Capt. J. H. Bradford, 19th Inf.	2	8th Cav. and 19th Inf.	..	..	..	..	..	..
Fort Clark, Tex	At Brackettville	Col. C. H. Smith, 19th Inf.	12	8th Cav. and 19th Inf.	..	..	..	..	..	..
Fort Concho, Tex	85 miles south of Abilene.	Col. M. M. Blunt, 16th Inf.	6	10th Cav. & 16th Inf.	..	..	..	..	..	..
Fort Davis, Tex	22 miles from Marfa Station.	Col. B. H. Grierson, 10th Cav.	10	10th Cav. & 16th Inf.	..	..	..	..	..	..
Fort McIntosh, Tex	At Laredo	Capt. H. A. Theaker, 16th Inf.	3	8th Cav. and 16th Inf.	..	..	..	..	..	..
Fort Ringgold, Tex.	At Rio Grande City	Maj. R. H. Offley, 19th Inf.	4	8th Cav. and 19th Inf.	..	..	..	..	..	..
Fort Stockton, Tex.	At Comanche Springs.	Lt. Col. J. F. Wade, 10th Cav.	3	10th Cav. & 16th Inf.	..	..	..	..	..	..
San Antonio, Tex	.....	Col. Elmer Otis, 8th Cav.	4	8th Cav., 3d Art., and 16th Inf.	..	..	..	..	..	..
Total	.....	.....	44	.....	1	..	1	1	..	..
DEPARTMENT OF THE PLATTE.										
Headquarters	Omaha, Nebr	Brig. Gen. O. O. Howard	...	Department staff.	1	..	2	1	..	..
Fort Bridger, Wyo.	10 miles from Carter's Station.	Lt. Col. T. M. Anderson, 9th Inf.	3	9th Inf.	..	..	..	..	..	..
Fort Laramie, Wyo	90 miles north of Cheyenne.	Col. John Gibbon, 7th Inf	7	7th Inf.	..	..	..	..	..	..
Fort McKinney, Wyo.	On Clear Fork Creek	Lt. Col. C. E. Compton. 5th Cav.	5	5th Cav. and 9th Inf.	..	..	..	..	..	..
Fort D. A. Russell, Wyo.	Near Cheyenne	Col. J. S. Mason, 9th Inf.	7	9th and 14th Inf.	..	..	..	..	..	..
Fort Fred Steele, Wyo.	On the line of the U. P. R. R.	Lt. Col. H. L. Chipman, 7th Inf.	4	7th and 14th Inf.	..	..	..	..	..	..
Fort Washakie, Wyo.	147 miles north of Green River Station.	Maj. A. T. Smith, 7th Inf.	3	5th Cav. and 6th Inf.	..	..	..	..	..	..
Fort Douglas, Utah	Near Salt Lake City	Col. A. McD. McCook, 6th Inf.	6	6th Inf.	..	..	..	..	..	..
Fort Thornburgh, Utah.	Near the Ute Agency.	Maj. E. G. Bush, 6th Inf	3	....do	..	..	..	..	..	..
Fort Niobrara, Nebr	4 miles from Valentine	Maj. E. V. Sumner, 5th Cav.	5	5th Cav. and 4th Inf.	..	..	..	..	..	..
Fort Omaha, Nebr	3 miles above Omaha	Col. W. P. Carlin, 4th Inf.	7	5th Art. and 4th Inf.	..	..	..	..	..	..
Fort Robinson, Nebr	At Red Cloud Agency.	Maj. L H. Carpenter, 5th Cav.	4	5th Cav. and 4th Inf.	..	..	..	..	..	..
Fort Sidney, Neb	Near Sidney Station	Maj. W. F. Drum, 14th Inf.	4	14th Inf.	..	..	..	..	..	..
Total	.....	.....	58	.....	1	..	2	1	..	..

Military Division of the Missouri, &c.—Continued.

PRESENT.																		ABSENT.						AGGREGATE.		
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post-chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and reg'tal staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
2	1	1	4	1	1	..	..	..	..	..	2	..	..	..	1	13	16	29	..	..	..	..	..	..	..	16	13	29
..	..	2	..	..	..	1	..	..	..	..	2	..	..	..	2	93	7	100	..	..	..	2	..	2	2	9	93	102
..	..	3	..	..	..	1	..	1	1	1	10	..	1	1	20	637	39	676	..	..	2	2	7	4	11	43	644	687
..	..	1	..	..	..	..	..	1	1	1	6	..	1	1	8	283	20	303	..	..	..	2	3	2	5	22	286	308
1	..	2	..	..	..	..	..	1	..	2	6	1	1	1	17	588	32	620	..	..	4	3	12	7	19	39	600	639
..	..	1	..	..	..	..	..	..	..	..	3	..	..	..	5	142	9	151	..	..	..	..	3	..	3	9	145	154
..	..	1	..	..	..	..	..	..	..	1	3	..	..	..	7	180	12	192	..	..	1	1	3	2	5	14	183	197
..	..	1	..	..	..	1	..	..	..	1	1	..	..	..	4	165	8	173	..	..	2	1	1	3	4	11	166	177
..	..	1	..	..	..	..	..	1	1	..	3	..	1	1	7	234	15	249	..	..	1	2	2	3	5	18	236	254
3	1	13	4	1	1	3	..	4	3	6	36	1	4	4	71	2,335	158	2,493	..	..	10	13	31	23	54	181	2,366	2,547
5	2	1	4	1	1	..	..	..	..	..	..	..	..	..	..	13	18	31	..	..	..	..	..	..	..	18	13	31
..	..	1	..	..	..	..	..	..	1	..	3	..	..	..	5	111	10	121	..	..	..	1	..	1	1	11	111	122
..	..	1	..	..	..	..	..	1	..	..	6	..	1	1	11	299	21	320	..	..	1	2	5	3	8	24	304	328
1	..	1	..	..	..	1	..	..	1	..	3	..	1	1	6	302	15	317	..	1	2	4	4	7	11	22	306	328
..	..	2	..	..	..	1	..	1	..	1	4	..	1	1	10	292	21	313	..	..	3	3	3	6	9	27	295	322
..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	5	165	8	173	..	..	3	3	5	6	11	14	170	184
..	..	1	..	..	..	..	..	..	..	1	2	..	..	..	5	147	9	156	..	..	1	..	1	1	2	10	148	158
..	..	1	..	..	..	1	..	1	1	..	4	..	1	1	9	246	19	265	..	..	2	3	2	5	7	24	248	272
..	..	2	..	..	..	..	..	..	..	1	2	..	..	..	5	116	10	126	..	..	1	1	2	2	4	12	118	130
..	..	1	..	..	..	1	..	..	..	1	3	..	..	..	6	234	12	246	..	..	2	4	7	6	13	18	241	259
..	..	2	..	..	..	1	..	1	..	1	7	..	1	..	10	341	23	364	..	1	..	4	5	5	10	28	346	374
..	..	1	..	..	..	..	..	..	..	1	4	..	..	..	6	203	12	215	..	..	..	2	5	2	7	14	208	222
..	..	1	..	..	..	..	..	..	..	1	4	..	1	1	5	190	13	203	..	1	..	2	7	3	10	16	197	213
6	2	16	4	1	1	5	..	4	4	7	43	..	6	5	83	2,659	191	2,850	..	3	15	29	46	47	93	238	2,705	2,943

C.—*Position and distribution of troops in the*

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors general.	Bureau of Military Justice.
DEPARTMENT OF DAKOTA.										
Headquarters.....	Fort Snelling, Minn ..	Brig. Gen. A. H. Terry ..	...	Department staff.	1	..	1	1	..	..
Fort Snelling, Minn	5 miles above Saint Paul.	Col. G. L. Andrews, 25th Inf.	5	4th Art. and 25th Inf.	..	..	..	..	..	..
Fort A. Lincoln, Dak.	Near Bismarck	Lt. Col. O. H. Moore, 17th Inf.	4	15th and 17th Inf.	..	..	..	..	..	..
Fort Bennett, Dak.	7 miles above Fort Sully.	Capt. Wm. N. Sage, 11th Inf.	1	11th Inf.....	..	..	..	..	..	..
Fort Buford, Dak ..	On the Upper Missouri River.	Maj. J. G. Tilford, 7th Cav.	6	7th Cav., 11th and 15th Inf.	..	..	..	..	..	..
Fort Hale, Dak	Near Yankton Agency	Maj. Fred'k Mears, 25th Inf.	2	25th Inf.....	..	..	..	..	..	..
Fort Meade, Dak ..	14 miles from Deadwood.	Lt. Col. A. W. Evans, 7th Cav.	10	7th Cav. and 25th Inf.	..	..	..	..	..	..
Fort Pembina, Dak	Near Pembina.....	Maj. G. M. Brayton, 15th Inf.	2	15th Inf.....	..	..	..	..	..	..
Fort Randall, Dak .	45 miles from Springfield.	Lt. Col. P. T. Swaine, 15th Inf.	4	....do	..	..	..	..	..	..
Fort Sisseton, Dak.	On Kettle Lake.....	Capt. C. E. Bennett, 17th Inf.	2	17th Inf.....	..	..	..	..	..	..
Fort Sully, Dak	25 miles from Pierre ..	Col. R. I. Dodge, 11th Inf	4	11th Inf.....	..	..	..	..	..	..
Fort Totten, Dak ..	On Devil's Lake	Maj. J. S. Conrad, 17th Inf.	2	7th Cav. and 17th Inf.	..	..	..	..	..	..
Fort Yates, Dak...	At Standing Rock Agency.	Col. C. C. Gilbert, 17th Inf.	5	....do	..	..	..	..	..	..
Helena, Mont	Headquarters District of Montana.	Col. T. H. Ruger, 18th Inf	...	.....	..	..	..	..	..	..
Fort Assinnaboine, Mont.	202 miles northeast of Helena.	Capt. Jacob Kline, 18th Inf.	10	2d Cav. and 18th Inf.	..	..	..	..	..	..
Fort Custer, Mont..	30 miles from Custer Station on the N. P. R. R.	Col. J. P. Hatch, 2d Cav.	9	2d Cav., 5th and 17th Inf.	..	..	..	..	..	..
Fort Ellis, Mont....	3 miles from Bozeman.	Maj. D. S. Gordon, 2d Cav.	3	2d Cav. and 3d Inf.	..	..	..	..	..	..
Fort Keogh, Mont..	At mouth of Tongue River.	Col. J. D. Wilkins, 5th Inf.	9	2d Cav. and 5th Inf.	..	..	..	..	..	..
Fort Maginnis, Mont.	110 miles west of Glendive.	Capt. J. G. MacAdams, 2d Cav.	5	2d Cav. and 18th Inf.	..	..	..	..	..	..
Fort Missoula, Mont.	At Missoula	Lt Col. George Gibson, 3d Inf.	4	3d Inf.....	..	..	..	..	..	..
Fort Shaw, Mont...	8 miles north of Helena	Col. J. R. Brooke, 3d Inf.	4	....do	..	..	..	..	..	..
Camp Poplar River, Mont.	At Poplar Creek Agency.	Capt. O. B. Read, 11th Inf	2	11th Inf.....	..	..	..	..	..	..
Total	.....	.....	93	.....	1	..	1	1	..	..
Grand total Military Division of the Missouri			280	.....	6	1	10	5	1	1

ADJUTANT-GENERAL'S OFFICE,
Washington, D. C., October 10, 1883.

Military Division of the Missouri, &c.—Continued.

PRESENT.																						ABSENT.						AGGREGATE.		
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post-chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regimental staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
4	1	1	4	1	1	..	..	..	..	..	2	..	..	..	....	14	17	31	..	..	..	..	....	....	....	17	14	31
....	2	..	..	..	..	..	1	..	..	4	..	1	1	10	274	20	294	..	1	1	..	....	2	2	22	274	296
..	1	..	..	..	..	..	..	..	..	3	..	..	..	7	131	11	142	..	..	1	..	2	1	3	12	133	145
..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	47	2	49	..	..	..	1	1	1	2	3	48	51
1	..	1	..	..	..	1	..	..	..	2	..	..	..	6	258	12	270	..	..	5	5	5	10	15	22	263	285
..	..	..	..	..	..	..	..	..	..	1	..	..	..	4	90	6	96	..	..	1	..	1	1	2	7	91	98
..	..	1	..	..	..	1	..	..	1	1	10	..	1	16	573	32	605	..	1	..	4	6	5	11	37	579	616
..	..	1	..	..	..	..	..	..	..	1	1	..	..	4	81	7	88	1	..	1	..	2	2	4	9	83	92
..	..	1	..	..	..	..	..	..	1	..	3	..	1	6	171	13	184	..	1	1	2	2	4	6	17	173	190
..	..	1	..	..	..	..	..	..	..	..	1	..	..	3	91	5	96	..	..	1	1	1	2	3	7	92	99
..	..	1	..	..	..	1	..	1	..	..	3	..	1	5	130	13	143	..	2	1	2	6	5	11	18	136	154
..	..	1	..	..	..	..	..	..	..	1	1	..	..	4	98	7	105	..	..	1	..	....	1	1	8	98	106
..	..	1	..	..	..	1	..	1	..	..	4	..	1	7	236	16	252	..	1	1	3	12	5	17	21	248	269
1	1	..	..	..	..	..	..	1	..	..	..	..	..	1	1	4	5	..	..	..	..	....	....	....	4	1	5
..	..	1	..	..	..	1	..	1	..	..	8	..	1	16	487	28	515	..	1	2	4	5	7	12	35	492	527
..	..	1	..	..	..	1	..	1	..	..	7	..	1	13	474	25	499	..	..	2	5	10	7	17	32	484	516
..	..	1	..	..	..	..	..	..	..	1	3	..	..	4	134	9	143	..	..	..	2	2	2	4	11	136	147
..	..	1	..	..	..	1	..	1	1	2	8	..	1	14	423	30	453	..	..	2	4	3	6	9	36	426	462
1	..	1	..	..	..	..	..	..	..	..	2	..	..	8	226	12	238	..	1	3	2	5	6	11	18	231	249
..	..	1	..	..	..	..	..	..	1	1	2	..	..	6	147	11	158	..	..	2	2	7	4	11	15	154	169
..	..	1	..	..	..	..	..	1	..	..	3	..	1	8	134	15	149	..	..	1	..	1	1	2	16	135	151
..	..	..	..	..	..	..	..	..	..	..	1	..	..	3	63	4	67	..	..	1	1	1	2	3	6	64	70
7	2	19	4	1	1	7	..	7	6	9	70	..	9	8	46	4,283	299	4,582	1	8	27	38	72	74	146	373	4,355	4,728
24	10	74	19	5	3	19	1	22	20	36	214	2	26	24	479	13,524	1002	14,526	1	13	73	99	194	186	380	1,188	13,718	14,906

R. C. DRUM,
Adjutant-General.

D.—*Position and distribution of troops in the Military Division of the Atlantic, commanded the latest returns on file in the*

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
DEPARTMENT OF THE EAST.				Divis'n staff	1	..	3	1	1	1
Headquarters	Governor's Island, N.Y.	Maj. Gen. W. S. Hancock	....	Department staff.	..	..	..	..	..	..
Fort Adams, R. I	Near Newport	Capt. C. B. Throckmorton, 4th Art.	5	4th Art	..	..	..	..	..	..
Fort Warren, Mass.	In Boston Harbor	Col. C. L. Best, 4th Art	2	do	..	..	..	..	..	..
Fort Preble, Me	Near Portland	Maj. W. M. Graham, 4th Art.	1	do	..	..	..	..	..	..
Fort Trumbull, Conn.	At New London	Maj. A. C. M. Pennington, 4th Art.	2	do	..	..	..	..	..	..
Fort Brady, Mich.	Near Sault Ste. Marie.	Capt. J. B. Parke, 10th Inf.	2	10th Inf	..	..	..	..	..	..
Fort Mackinac, Mich.	Michilimackinac Island.	Capt. E. E. Sellers, 10th Inf.	2	do	..	..	..	..	..	..
Fort Wayne, Mich.	Near Detroit	Col. H. B. Clitz, 10th Inf.	4	do	..	..	..	..	..	..
Fort Columbus, N. Y.	Governor's Island, N. Y.	Maj. R. H. Jackson, 5th Art.	3	5th Art	..	..	..	..	..	..
Fort Hamilton, N. Y.	New York Harbor	Col. John Hamilton, 5th Art.	5	do	..	..	..	..	..	..
Fort Niagara, N. Y.	Near Youngstown	Maj. W. H. Penrose, 12th Inf.	2	12th Inf	..	..	..	..	..	..
Fort Porter, N. Y.	At Buffalo	Lt. Col. H. R. Mizner, 10th Inf.	2	10th Inf	..	..	..	..	..	..
Fort Schuyler, N.Y.	At Throg's Neck	Maj. A. C. Wildrick, 5th Art.	2	5th Art	..	..	..	..	..	..
Madison Barracks, N. Y.	Sackett's Harbor	Col. O. B. Wilcox. 12th Inf.	6	12th Inf	..	..	..	..	..	..
Plattsburg Barracks, N. Y.	Plattsburg	Capt. M. H. Stacey, 12th Inf.	2	do	..	..	..	..	..	..
Fort McHenry, Md.	Baltimore	Lt. Col. H. G. Gibson, 2d Art.	3	2d Art	..	..	..	..	..	..
Washington Barracks, D. C.	Washington	Col. R. B. Ayres. 2d Art.	5	do	..	..	..	..	..	..
Fort Monroe, Va		Maj. L. R. L. Livingston, 4th Art.	5	1st, 2d, 3d, 4th, and 5th Art.	..	..	..	..	..	..
Total			53		..	..	..	..	..	..
DEPARTMENT OF THE SOUTH.										
Headquarters	Newport Barracks, Ky	Maj. Gen. W. S. Hancock	....	Department staff.	..	..	..	1	..	..
Saint Francis Barracks, Fla.	Saint Augustine	Lt. Col. Alex'r Piper, 3d Art.	2	3d Art	..	..	..	..	..	..
Fort Barrancas, Fla.	Pensacola Harbor	Capt. John L. Tiernon, 3d Art.	3	do	..	..	..	..	..	..
Little Rock Barracks, Ark.	Little Rock	Maj. E. C. Bainbridge, 3d Art.	2	2d and 3d Art.	..	..	..	..	..	..
Mount Vernon Barracks, Ala.	Mount Vernon	1st Lt. W. A. Kobbé, 3d Art.	2	3d Art	..	..	..	..	..	..
Jackson Barracks, La.	New Orleans	Capt. William Sinclair, 3d Art.	2	do	..	..	..	..	..	..
Newport Barracks, Ky.	Newport	Capt. C. A. Woodruff, 2d Art.	1	2d Art	..	..	..	..	..	..
Total			12		..	..	..	1	..	..
Grand total Military Division of the Atlantic			65		1	..	3	2	1	1

ADJUTANT-GENERAL'S OFFICE,
Washington, D. C., October 10, 1883.

by Maj. Gen. W. S. Hancock, headquarters Governor's Island, New York Harbor, taken from Adjutant-General's Office, 1883.

PRESENT.																		ABSENT.						AGGREGATE.		
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post-chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regt'al staff officers.	Captains.	Subalterns	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	....	14	11	25	..	..	..	....	....	....	....	11	14	25
2	3	..	7	..	..	..	..	..	..	1	2	..	..	..	....	.....	16	16	..	..	..	....	....	....	....	16	.....	16
1	..	1	..	..	..	..	..	..	..	..	5	..	1	1	9	208	18	226	1	..	..	6	5	7	12	25	213	238
..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	5	73	8	81	..	..	1	1	....	2	2	10	73	83
..	..	1	..	..	..	..	..	..	..	1	....	..	..	..	3	41	5	46	..	..	1	....	....	1	1	6	41	47
..	..	1	..	..	..	..	..	..	..	1	2	..	..	..	3	68	7	75	..	..	..	2	1	2	3	9	69	78
..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	3	73	6	79	..	..	..	1	....	1	1	7	73	80
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	3	79	5	84	..	..	1	....	....	1	1	6	79	85
..	..	2	..	..	..	..	..	1	..	..	4	..	1	1	7	168	16	184	..	..	..	....	....	....	....	16	168	184
..	..	2	..	..	..	..	..	..	..	1	2	..	..	..	9	112	14	126	..	..	1	....	1	1	2	15	113	128
..	..	3	..	..	..	..	..	1	1	..	5	..	1	1	14	230	26	256	..	..	..	1	2	1	3	27	232	259
..	..	1	..	..	..	..	..	..	..	1	2	..	..	..	3	74	7	81	..	..	..	1	....	1	1	8	74	82
..	..	1	..	..	..	..	..	..	1	..	2	..	..	..	4	64	8	72	..	..	..	....	5	....	5	8	69	77
..	..	1	..	..	..	..	..	..	..	1	2	..	..	..	5	71	9	80	..	..	..	1	....	1	1	10	71	81
..	..	2	..	..	..	..	..	1	..	..	5	..	1	1	8	202	18	220	..	..	1	3	3	4	7	22	205	227
..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	4	61	7	68	..	..	..	....	1	....	1	7	62	69
1	..	1	..	..	..	..	..	..	1	..	2	..	..	..	4	96	9	105	..	..	1	4	....	5	5	14	96	110
..	..	2	..	..	..	..	..	1	..	1	5	..	1	1	11	224	22	246	..	..	..	3	2	3	5	25	226	251
1	..	2	..	..	..	1	..	..	..	2	5	..	..	..	22	237	33	270	..	1	..	2	4	3	7	36	241	277
6	3	24	7	..	..	1	..	5	3	9	49	..	5	5	117	2,081	234	2,315	1	1	6	25	24	33	57	267	2,105	2,372
3	2	1	3	..	..	..	..	..	..	1	..	..	..	..	....	9	11	20	..	..	..	....	....	....	....	11	9	20
..	..	1	..	..	..	..	..	..	1	..	2	..	1	1	2	75	8	83	..	2	..	4	2	6	8	14	77	91
..	..	1	..	..	..	..	..	..	..	..	3	..	..	..	8	94	12	106	..	..	..	1	2	1	3	13	96	109
..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	6	102	9	111	..	..	1	1	1	2	3	11	103	114
..	..	1	..	..	..	..	..	..	..	..	....	..	..	..	5	63	6	69	..	..	1	1	1	2	3	8	64	72
..	..	2	..	..	..	..	..	..	..	..	2	..	..	..	4	67	8	75	..	..	..	2	1	2	3	10	68	78
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	2	41	4	45	..	..	..	2	....	2	2	6	41	47
3	2	8	3	..	..	..	..	..	1	2	9	..	1	1	27	451	58	509	..	2	2	11	7	15	22	73	458	531
10	6	33	11	..	..	1	..	5	4	11	58	..	6	6	144	2,546	303	2,849	2	3	8	36	31	48	79	351	2,577	2,928

R. C. DRUM,
Adjutant-General.

E.—*Position and distribution of troops in the Military Division of the Pacific, commanded* *latest returns on file in the*

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
				Divis'n staff.	1	..	2	1	1	1
DEPARTMENT OF CALIFORNIA.										
Headquarters	Presidio, San Francisco, Cal.	Maj. Gen. J. M. Schofield.	...	Department staff.	..	..	..	..	..	..
Alcatraz Island, Cal	San Francisco Harbor	Maj. R. T. Frank, 1st Art.	2	1st Art	..	..	..	..	..	..
Angel Island, Cal	do	Maj. A. S. Burt, 8th Inf	3	8th Inf	..	..	..	..	..	..
Benicia Barracks, Cal.	At Benicia	Lt. Col. Montgomery Bryant, 8th Inf.	2	do	..	..	..	..	..	..
Fort Bidwell, Cal	In Surprise Valley	Capt. D. T. Wells, 8th Inf.	2	1st Cav. and 8th Inf.	..	..	..	..	..	..
Fort Mason, Cal	San Francisco Harbor.	Capt. J. A. Darling, 1st Art.	1	1st Art	..	..	..	..	..	..
Fort Winfield Scott, Cal.	do	Maj. John Mendenhall, 1st Art.	3	do	..	..	..	..	..	..
Fort Gaston, Cal	In Hoopa Valley	Capt. Charles Porter, 8th Inf.	1	8th Inf	..	..	..	..	..	..
Presidio, Cal	At San Francisco	Col. G. P. Andrews, 1st Art.	4	1st Cav. and 1st Art.	..	..	..	..	..	..
San Diego Barracks, Cal.	At San Diego	Capt. F. A. Whitney, 8th Inf.	1	8th Inf	..	..	..	..	..	..
Fort Halleck, Nev.	12 miles south of Halleck Station.	Maj. G. B. Sanford, 1st Cav.	2	1st Cav. and 8th Inf.	..	..	..	..	..	..
Fort McDermit, Nev.	78 miles north of Winnemucca.	Capt. W. S. Worth, 8th Inf.	1	8th Inf	..	..	..	..	..	..
Total			22		..	..	..	..	..	..
DEPARTMENT OF THE COLUMBIA.										
Headquarters	Vancouver Barracks, Wash Ter.	Brig. Gen. N. A. Miles	...	Department staff.	1	..	2	1	..	..
Boise Barracks, Idaho.	Near Boise City	Maj. John Green, 1st Cav.	2	1st Cav. and 21st Inf.	..	..	..	..	..	..
Fort Cœur d'Alene, Idaho.	Near Cœur d'Alene Station.	Col. Frank Wheaton, 2d Inf.	6	1st Cav. and 2d Inf.	..	..	..	..	..	..
Fort Lapwai, Idaho	Near Lewiston	Maj. Leslie Smith, 2d Inf.	2	do	..	..	..	..	..	..
Fort Canby, Wash.	Mouth of Columbia River.	Capt. Evan Miles, 21st Inf.	1	21st Inf	..	..	..	..	..	..
Fort Spokane, Wash.	Near Spokane Falls	Lt. Col. H. C. Merriam, 2d Inf.	5	1st Cav. and 2d Inf.	..	..	..	..	..	..
Fort Townsend, Wash.	Near Fort Townsend	Lt. Col. Alexander Chambers, 21st Inf.	2	21st Inf	..	..	..	..	..	..
Fort Walla Walla, Wash.	At Walla Walla	Col. Cuvier Grover, 1st Cav.	4	1st Cav	..	..	..	..	..	..
Vancouver Barracks, Wash.	At Vancouver	Col. H. A. Morrow, 21st Inf.	6	1st Art. and 21st Inf.	..	..	..	..	..	..
Fort Klamath, Oreg	Near Lake Klamath	Maj. E. P. Pearson, 21st Inf.	2	1st Cav. and 21st Inf.	..	..	..	..	..	..
Fort Stevens, Oreg.	Mouth of Columbia River.	1st Lt. R. G. Shaw, 1st Art.	1	1st Art	..	..	..	..	..	..
Total			31		1	..	2	1	..	..

by Maj. Gen. J. M. Schofield, headquarters Presidio, San Francisco, Cal., taken from the Adjutant-General's Office, 1883.

PRESENT.																				ABSENT.								AGGREGATE.		
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post-chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and reg'tal staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
1	2	1	1	1	..	..	1	..	..	..	....	..	..	..	...	16	13	29	..	..	..	....	....	....	...	13	16	29
..	..	1	4	..	..	..	..	..	..	..	....	..	..	..	....	.....	5	5	..	..	..	....	....	....	....	5	.....	5
..	..	1	..	..	..	1	..	..	..	1	1	..	..	..	5	82	9	91	..	..	1	1	....	2	2	11	82	93
..	..	1	..	..	..	1	..	..	..	1	3	..	1	..	4	127	11	138	..	2	..	1	4	3	7	14	131	145
..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	2	68	5	73	..	..	..	2	....	2	2	7	68	75
..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	3	93	5	98	..	..	..	1	5	1	6	6	98	104
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	3	40	5	45	..	..	..	1	1	1	2	6	41	47
..	..	1	..	..	..	..	..	..	..	1	3	..	..	..	4	101	9	110	..	..	..	4	2	4	6	13	103	116
..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	40	2	42	..	..	..	1	....	1	1	3	40	43
..	..	1	..	..	..	1	..	1	..	1	4	..	1	1	9	207	19	226	..	..	..	2	8	2	10	21	215	236
..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	3	41	5	46	..	..	..	1	2	1	3	6	43	49
..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	2	95	5	100	..	..	..	2	2	2	4	7	97	104
..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	....	36	2	38	..	..	..	1	....	1	1	3	36	39
..	..	6	4	..	..	4	..	1	1	6	21	..	2	1	36	930	82	1,012	..	2	1	17	24	20	44	102	954	1,056
2	1	2	3	1	1	..	..	..	..	..	1	..	..	..	....	13	15	28	..	..	..	....	....	....	....	15	13	28
..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	2	102	5	107	1	..	..	2	2	3	5	8	104	112
..	..	2	..	..	..	..	..	1	..	..	4	..	1	1	10	281	19	300	..	..	2	2	4	4	8	23	285	308
..	..	1	..	..	..	..	..	..	..	1	2	..	..	..	2	93	6	99	..	..	..	2	2	2	4	8	95	103
..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	48	2	50	..	..	..	1	....	1	1	3	48	51
..	..	1	..	..	..	..	..	..	1	..	4	..	..	..	7	221	13	234	..	..	1	3	5	4	9	17	226	243
..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	3	71	6	77	..	..	..	....	1	....	1	6	72	78
..	..	2	..	..	..	..	..	1	..	..	3	..	1	1	7	256	15	271	..	..	1	1	3	2	5	17	259	276
..	..	2	..	..	..	..	..	1	..	..	5	..	1	1	11	262	21	283	..	..	1	....	2	1	3	22	264	286
..	..	1	..	..	..	1	..	..	..	1	2	..	..	..	2	78	7	85	..	..	..	2	1	2	3	9	79	88
..	..	..	..	..	..	..	..	..	..	..	....	..	..	..	3	42	3	45	..	..	1	....	1	1	2	4	43	47
2	1	12	3	1	1	1	..	3	2	2	26	..	3	3	48	1,467	112	1,579	1	..	6	13	21	20	41	132	1,488	1,620

E.—*Position and distribution of troops in the*

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
DEPARTMENT OF ARIZONA.										
Headquarters	Whipple Barracks, Ariz.	Brig. Gen. George Crook.	...	Department staff.	1	...	...	1	...	...
Fort Apache, Ariz.	In White Mountain Country.	Maj. Nicholas Nolan, 3d Cav.	5	3d and 6th Cav. and 1st Inf.	...	...	...	...	...	...
Fort Bowie, Ariz	At Apache Pass	Capt. W. A. Rafferty, 6th Cav.	3	....do	...	...	...	...	...	...
Fort Grant, Ariz	27 miles from Willcox.	Lt. Col. C. G. Bartlett, 1st Inf.	5	....do	...	...	...	...	...	...
Fort Huachuca, Ariz.	7 miles from Huachuca Station.	Lt. Col. A. P. Morrow, 6th Cav.	4	....do	...	...	...	...	...	...
Fort Lowell, Ariz	Near Tucson	Col. E. A. Carr, 6th Cav	3	6th Cav. and 1st Inf.	...	...	...	...	...	...
Fort McDowell, Ariz.	56 miles from Maricopa.	Maj. James Biddle, 6th Cav.	3	....do	...	...	...	...	...	...
Fort Mojave, Ariz	Near Mojave City	Capt. F. E. Pierce, 1st Inf.	1	1st Inf	...	...	...	...	...	...
Fort Thomas, Ariz.	65 miles from Bowie Station.	Capt. P. D. Vroom, 3d Cav.	4	3d Cav	...	...	...	...	...	...
Fort Verde, Ariz	38 miles from Prescott.	Capt. Gerald Russell, 3d Cav.	2	3d Cav. and 1st Inf.	...	...	...	...	...	...
Whipple Barracks, Ariz.	At Prescott	Lt. Col. D. R. Clendenin, 3d Cav.	2	....do	...	...	...	...	...	...
San Carlos, Ariz	At the San Carlos Agency.	Capt. Emmet Crawford, 3d Cav.	...	Indian scouts	...	...	...	...	...	...
Total			32		1	...	...	1	...	...
Grand total Military Division of the Pacific			85		3	...	4	3	1	1

ADJUTANT-GENERAL'S OFFICE,
Washington, D. C., October 10, 1883.

Military Division of the Pacific, &c.—Continued.

PRESENT.																						ABSENT.							AGGREGATE.		
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post-chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and reg'tal staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
1	1	1	3	1	...	...	...	...	...	1	1	...	...	....	13	11	24	...	...	...	....	....	....	....	11	13	24
...	...	...	...	...	...	...	...	...	...	1	2	...	...	7	210	10	220	...	...	3	3	11	6	17	16	221	237
...	1	...	...	...	...	...	...	...	...	...	2	...	...	4	139	7	146	...	...	1	2	....	3	3	10	139	149
...	1	...	...	...	...	...	...	...	1	...	5	...	1	1	8	260	17	277	1	2	..	2	6	5	11	22	266	288
1	...	1	...	...	...	...	...	...	1	...	2	...	...	...	4	211	9	220	...	...	2	3	2	5	7	14	218	237
...	...	1	...	...	...	...	...	1	...	1	2	...	1	1	2	159	9	168	..	1	1	4	3	6	9	15	162	177
...	...	...	...	...	...	...	...	...	...	1	3	...	...	...	5	149	9	158	..	...	..	1	4	1	5	10	153	163
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	41	2	43	..	...	..	1	....	1	1	3	41	44
...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	5	210	7	217	...	...	2	2	4	4	8	11	214	225
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	3	97	4	101	..	...	1	1	2	2	4	6	99	105
...	2	...	...	...	...	...	...	...	1	...	2	...	1	1	3	107	10	117	..	...	..	1	2	1	3	11	109	120
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	108	2	110	..	...	..	....	....	....	....	2	108	110
2	1	8	3	1	...	...	...	1	3	4	23	..	3	3	43	1,704	97	1,801	1	3	10	20	34	34	68	131	1,738	1,869
5	4	27	11	3	1	5	1		6	12	70	..	8	7	127	4,117	304	4,421	2	5	17	50	79	74	153	378	4,196	4,574

R. C. DRUM,
Adjutant-General.

F.—Military geographical divisions, departments, and posts,

WITH DISTRIBUTION OF TROOPS, POST-OFFICES, TELEGRAPH STATIONS, AND NEAREST RAILROAD STATIONS OR BOAT LANDINGS.

DIVISIONS.

DIVISION OF THE MISSOURI.

Lieut. Gen. P. H. SHERIDAN, comdg.—Hdqrs. Chicago, Ill. Embraces Departments of the Missouri, Dakota, Texas, and the Platte.

DIVISION OF THE ATLANTIC.

Maj. Gen. WINFIELD S. HANCOCK, comdg.—Hdqrs. Governor's Island, New York Harbor. Embraces Departments of the East and the South.

DIVISION OF THE PACIFIC.

Maj. Gen. JOHN M. SCHOFIELD, comdg.—Hdqrs. Presidio of San Francisco, Cal. Embraces Departments of California, of the Columbia, and of Arizona.

DEPARTMENTS.

DEPARTMENT OF ARIZONA.

Brig. Gen. GEORGE CROOK, comdg.—Hdqrs. Whipple Barracks, Prescott, Ariz.

Geographical limits.—Territory of Arizona.
Troops.—3d (except B) and 6th Cavalry; 1st Infantry (except H).

DEPARTMENT OF CALIFORNIA.

Maj. Gen. JOHN M. SCHOFIELD, comdg.—Hdqrs. Presidio of San Francisco, Cal.

Geographical limits.—States of California and Nevada.
Troops.—A, I, and M, 1st Cavalry; hdqrs., A, B, C, D, F, H, K, and M, 1st Artillery; 8th Infantry.

DEPARTMENT OF THE COLUMBIA.

Brig. Gen. NELSON A. MILES, comdg.—Hdqrs. Vancouver Barracks, Wash. T.

Geographical limits.—State of Oregon, and the Territories of Washington, Idaho, and Alaska, excepting so much of Idaho as lies east of a line formed by the extension of the western boundary of Utah to the northeastern boundary of Idaho.
Troops.—Hdqrs. B, C, D, E, F, G, H, K, and L, 1st Cavalry; E, I, and L, 1st Artillery; 2d and 21st Infantry.

DEPARTMENT OF DAKOTA.

Brig. Gen. ALFRED H. TERRY, comdg.—Hdqrs. Fort Snelling, Minn.

Geographical limits.—State of Minnesota and Territories of Dakota and Montana.
Troops.—2d and 7th Cavalry (except G); F, 4th Artillery; 3d, 5th, 11th (except G), 15th, 17th, 18th, and 25th Infantry.

DEPARTMENT OF THE EAST.

Maj. Gen. WINFIELD S. HANCOCK, Comdg.—Hdqrs. Governor's Island, New York Harbor.

Geographical limits.—The New England States, and New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio, Michigan, Wisconsin, Indiana, and the District of Columbia.
Troops.—G, 1st Artillery; 2d Artillery (except E, F, and G); A, 3d Artillery; 4th Artillery (except F); 5th Artillery (except D); 10th and 12th Infantry.

DEPARTMENT OF THE MISSOURI.

Maj. Gen. JOHN POPE, comdg.—Hdqrs. Fort Leavenworth, Kans.

Geographical limits.—States of Missouri, Kansas, Illinois, and Colorado; Territory of New Mexico, Indian Territory, and the posts of Fort Elliott and Fort Bliss, Tex., including the town of San Elizario, on the Rio Grande, and that portion of El Paso County lying north of an east and west line passing immediately south of San Elizario.
Troops.—B, 3d; 4th; G, 7th; M 8th, and 9th Cavalry; F, 2d Artillery; H, 1st; A, 4th; G, 11th; 13th; D, F, G, H, 14th; 20th, 22d, 23d, and 24th Infantry.

DEPARTMENT OF THE PLATTE.

Brig. Gen. OLIVER O. HOWARD, comdg.—Hdqrs. Omaha, Nebr.

Geographical limits.—States of Iowa and Nebraska; Territories of Utah and Wyoming, and so much of the Territory of Idaho as lies east of a line formed by the extension of the western boundary of Utah to the northeastern boundary of Idaho.
Troops.—5th Cavalry; D, 5th Artillery; 4th (except A); 6th, 7th, 9th, and hdqrs., A, B, C, E, I, and K, 14th Infantry.

DEPARTMENT OF THE SOUTH.

Maj. Gen. WINFIELD S. HANCOCK, comdg.—Hdqrs. Newport Barracks, Ky.

Geographical limits.—States of North Carolina, South Carolina, Georgia, Florida, Louisiana, Arkansas, Mississippi, Alabama, Kentucky, and Tennessee.
Troops.—E and G, 2d Artillery; hdqrs., B, C, D, E, G, H, I, K, L, and M, 3d Artillery.

DEPARTMENT OF TEXAS.

Brig. Gen. C. C. AUGUR, comdg.—Hdqrs. San Antonio, Tex.

Geographical limits.—State of Texas, excepting the posts of Fort Elliott and Fort Bliss, Tex., and that portion of El Paso County embraced in the Department of the Missouri.
Troops.—8th (except M) and 10th Cavalry; F, 3d Artillery; 16th and 19th Infantry.

POSTS.

[Those not garrisoned are indicated thus,*.]

Abraham Lincoln, Fort Dak. (Dept. Dak.).—P. O. and tel. stn. Bismarck; boat ldg. at post and stage daily from Mandan, on N. P. R. R., dist. 4½ m.
Adams, Fort, R. I. (Dept. East).—P. O. and tel. stn. Newport, R. I.; boat from Newport, dist. 1½ m.
Alcatraz Island, Cal. (Dept. Cal.).—P. O. same; tel. and R. R. stn. San Francisco, Cal., dist. 4 m.; steamer to post.
**Andrew, Fort, Mass.* (Dept. East).—P. O. and tel. stn. Plymouth, Mass., dist. 5 m. by water.
Angel Island, Cal. (Dept. Cal.).—P. O. same; tel. and R. R. stn. San Francisco, Cal., dist. 7 m.; steamer to post.
Apache, Fort, Ariz. (Dept. Ariz.).—P. O. and tel. stn. same; stage from Holbrook, on A. and P. R. R., dist. 90 m.
Assiniboine, Fort, Mont. (Dept. Dak.).—P. O. and tel. stn. same; tri-weekly stage from Helena, on N. P. R. R., dist. 202 m.; stmbt. ldg. (summer) Coal Banks, on Missouri River, dist 38 m.
Barrancas, Fort, Fla. (Dept. South).—P. O. Warrington, Fla.; tel. stn. Pensacola Navy Yard, Fla.; steamer daily from R. R. at Pensacola, Fla., dis. 9 m.
**Baton Rouge Barracks, La.* (Dept. South).—P. O. and tel. stn. Baton Rouge, La.; steamer from New Orleans, dist. 130 m.
Bayard, Fort, N. Mex. (Dept. Mo.).—P. O. and tel. stn. same; stage from Silver City, on the S. C. and D. R. R., dist. 9 m.
Benicia Barracks, Cal. (Dept. Cal.).—P. O., tel. and R. R. stn. (C. P. R. R.) Benicia, Cal., dis. 1 m.
Bennett, Fort, Dak. (Dept. Dak.).—P. O. and tel. stn. same; tri-weekly stage from Pierre, Dak., on C. and N. W. R. R., dist. 32 m.; stmbt. ldg. (summer) dist. 2 m.

Bidwell, Fort, Cal. (Dept. Cal.).—P. O. and tel. stn. same; daily stage from Reno, Nev., on C. P. R. R., dist. 200 m.

Bliss, Fort, Tex. (Dept. Mo.).—P. O., tel. and R. R. stn. (A. T. and S. F. and C. P. R. R's.) El Paso, Tex.; dist. 1½ m.

Boise Barracks, Idaho (Dept. Columbia).—P. O. and tel. stn. Boise City, Idaho, dist. 1 m.; daily stage from Kuna, Idaho, on the O. S. L. division of U. P. R. R., dist. 15 m.; and from Meacham's Station, Oreg., on O. R. and N. Co's. R. R., dist. 215 m.

Bowie, Fort, Ariz. (Dept. Ariz.).—P. O. and tel. stn. same; daily stage from Bowie Station, Ariz., on S. P. R. R., dist. 13 m.

Brady, Fort, Mich. (Dept. East).—P. O. Saulte Ste. Marie, Mich.; tel. stn. Saint Ignace City, Mich.; boats land at post in summer; sled in winter from Mackinaw City, on G. R. and I. R. R., and M. C. R. R., dist. 68 m.

Bridger, Fort, Wyo. (Dept. Platte).—P. O. and tel. stn. same (via Carter, Wyo.); daily stage from Carter Station, on U. P. R. R., dist. 10 m.

Brown, Fort, Tex. (Dept. Tex.).—P. O., tel. and R. R. stn. (R. G. R. R.) Brownsville, Tex.

Buford, Fort, Dak. (Dept. Dak.).—P. O. and tel. stn. same; stmbt. ldg. at post on Missouri River; buckboard from Glendive, on N. P. R. R., dist. 76 m.

Canby, Fort, Wash. T. (Dept. Columbia).—P. O. and tel. stn. Astoria, Oreg.; daily steamer from Astoria, dist. 14 m.

**Carroll, Fort, Md.* (Dept. East).—P. O. and tel. stn. Baltimore Md., dist. 8 m. by water.

**Caswell, Fort, N. C.* (Dept South).—P. O. and tel. stn. Smithville, N. C., dist. 2 m.; steamer daily from Wilmington to Smithville, dist. 22 m.

Clark, Fort, Tex. (Dept. Tex.).—P. O. Brackettville, Tex.; tel. stn. Spofford Junction; daily stage from Spofford Junction, Tex., on G. H. and S. A. R. R., dist. 9½ m.

**Clark's Point, Mass., Fort, at* (Dept. East).—P. O. and tel. stn. New Bedford, Mass.; private conveyance from New Bedford, dist. 3 m.

**Clinch, Fort, Fla.* (Dept. South).—P. O., tel. and R. R. stn. Fernandina, Fla., dist. 3 m.

Cœur d'Alene, Fort, Idaho (Dept. Columbia).—P. O. and tel. stn. same; daily stage from Rathdrum, Idaho, on N. P. R. R., dist. 10½ m.

Columbus, Fort, N. Y. H. (Dept. East).—P. O. and tel. stn. Governor's Island, N. Y.; Government steamer from New York City, dist. 1½ m.

Concho, Fort, Tex. (Dept. Tex.).—P. O. and tel. stn. same; daily stage from Abilene, Tex., on T. P. R. R., dist. 85 m.

**Constitution, Fort, N. H.* (Dept. East).—P. O. New Castle, N. H.; tel. stn. Portsmouth, N. H.; stage from Portsmouth, dist. 3 m.

Craig, Fort, N. Mex. (Dept. Mo.).—P. O. and tel. stn. same; R. R. stn. San Marcial, on A. T. and S. F. R. R.; private conveyance to post, dist. 5 m.

Cummings, Fort, N. Mex. (Dept. Mo.).—P. O. and tel. stn. same; Government transportation from Florida, on A. T. and S. F. R. R., dist. 4½ m.

Custer, Fort, Mont. (Dept. Dak.).—P. O. and tel. stn. same; daily stage from Custer Station, on N. P. R. R., dist. 30 m.

D. A. Russell, Fort, Wyo. (Dept. Platte).—P. O., tel. and R. R. stn. Cheyenne, Wyo., on U. P. R. R., dist. 3 m.

Davis, Fort, Tex. (Dept. Tex.).—P. O. and tel. stn. same; daily stage from Marfa, on S. P. R. R., dist. 22 m.

**Delaware, Fort, Del.* (Dept. East).—P. O. and tel. stn. Delaware City, Del.; daily steamer from Philadelphia to Delaware City, dist. 1½ m. from post; daily stage from Kirkwood, on P. W. and B. R. R., dist. 8 m.

Douglas, Fort, Utah (Dept. Platte).—P. O., tel. and R. R. stn. Salt Lake City, Utah, dist. 2 m.

**Dutch Island, Fort on, R. I.* (Dept. East).—P. O. Jamestown, R. I.; tel. stn. Newport, R. I.; special conveyance from Newport, dist. 5 m.

Elliott, Fort, Tex. (Dept. Mo.).—P. O. Mobeetie, Tex.; tel. stn. at post; daily stage or buckboard from Dodge City, Kans., on A. T. and S. F. R. R., dist. 190 m.

Ellis, Fort, Mont. (Dept. Dak.).—P. O. and tel. stn. Bozeman; R. R. stn. (N. P. R. R.) at post.

**Finn's Point, N. J., Battery at* (Dept. East).—P. O. and tel. stn. Salem, N. J., dist. 6 m.

**Foote, Fort, Md.* (Dept. East).—P. O. same; tel. stn. Alexandria, Va.; steamer from Washington, D. C., dist. 9 m.

Fred Steele, Fort, Wyo. (Dept. Platte).—P. O., tel. and R. R. stn. (U. P. R. R.) same.

**Gaines, Fort, Ala.* (Dept. South).—P. O., tel. and R. R. stn. Mobile, Ala.: boat once a month from Mobile, dist. 30 m.

Garland, Fort, Colo. (Dept. Mo.).—P. O., tel. and R. R. stn. (D. and R. G. R. R.) same.

Gaston, Fort, Cal. (Dept. Cal.).—P. O. Hoopa Valley, Cal.; tel. stn. Arcata, Cal.; biweekly steamers from San Francisco to Arcata, dist. 284 m.; thence by saddle-animal (mountain trail), dist. 42 m.

Gibson, Fort, Ind. T. (Dept. Mo.).—P. O. same; tel. stn. Muskogee; daily stage from Muskogee, on M. K. and T. R. R., dist. 8 m.

**Gorges, Fort, Me.* (Dept. East).—P. O. and tel. stn. Portland, Me., dist. 2 m.

Grant, Fort, Ariz. (Dept. Ariz.).—P. O. and tel. same; daily stage from Willcox, on S. P. R. R., dist. 28 m.

**Griswold, Fort, Conn.* (Dept. East).—P. O. Groton, Conn.; tel. stn. New London, Conn.; ferry from New London, dist. 1 m.

Hale, Fort, Dak. (Dept. Dak.).—P. O. same; tel. and R. R. stn. (C. M. and S. P. R. R.) Chamberlain, Dak., dist. 15 m.

Halleck, Fort, Nev. (Dept. Cal.).—P. O. same; tel. and R. R. stn. Halleck Station, on C. P. R. R., dist. 12 m.; buckboard daily to post.

Hamilton, Fort, N. Y. (Dept. East). —P. O. and tel. stn. same; city railroad from Brooklyn, dist. 6 m.

Hays, Fort, Kans. (Dept. Mo.).—P. O., tel. and R. R. stn. (K. P. R. R.) Hays City, Kans.

Huachuca, Fort, Ariz. (Dept. Ariz.).—P. O. same; tel. stn. Huachuca Siding; Govt. transportation from Huachuca Siding, on N. M. and A. R. R., dist. 7 m.

**Independence, Fort, Mass.* (Dept. East).—P. O. and tel. stn. Boston, Mass.; Government tug from Boston, dist. 3 m.

Jackson Barracks, La. (Dept. South).—P. O., tel. and R. R. stn. New Orleans, La.

**Jackson, Fort, Ga.* (Dept. South).—P. O., tel. and R. R. stn. Savannah, Ga., dist. 4 m.

**Jackson, Fort, La.* (Dept. South).—P. O. "The Forts," La.; tel. stn. Quarantine, La.; steamer tri-weekly from New Orleans, dist. 73 m.

**Jefferson, Fort, Fla.* (Dept. South).—P. O. and tel. stn. Key West, Fla.; boat from Key West, dist. 71 m.

**Johnston, Fort, N. C.* (Dept. South).—P. O. and tel. stn. Smithville, N. C.; steamer daily from Wilmington, N. C., dist. 22 m.

Keogh, Fort, Mont. (Dept. Dak.).—P. O. and R. R. stn. (N. P. R. R.) same; tel. stn. Miles City, Mont.

**Key West Barracks, Fla.* (Dept. South).—P. O., tel, stn., and boat ldg. Key West, Fla.

Klamath, Fort, Oreg. (Dept. Columbia).—P. O. and tel. stn. same; stage from Redding, Cal., on Oregon division of C. P. R. R., dist. 218 m.; and from Glendale, Oreg., on O. and C. R. R., dist. 174 m.

**Knox, Fort, Me.* (Dept East).—P. O. and tel. stn. Bucksport, Me.; ferry from Bucksport, dist. ¼ m.

**Lafayette, Fort, N. Y. H.* (Dept. East).—P. O. and tel. stn. Fort Hamilton, N. Y.; city railroad from Brooklyn, dist. 6 m.

Lapwai, Fort, Idaho (Dept. Columbia).—P. O. and tel. stn. same; daily stage from Lewiston, Idaho, end of semi-weekly stmbt. route on Snake River, dist. 12 m.

Laramie, Fort, Wyo. (Dept. Platte).—P. O. and tel. stn. same; stage daily from Cheyenne, on U. P. R. R., dist. 90 m.

Leavenworth, Fort, Kans. (Dept. Mo.).—P. O., tel. and R. R. stn. (M. P. R. R., and C. R. I. and P. R. R.) same.

Leavenworth Military Prison, Kans. (Dept. Mo.).—P. O., tel. and R. R. stn. same as Fort Leavenworth.

Lewis, Fort, Colo. (Dept. Mo.).—P. O. and tel. stn. same; stage from Durango, Colo., on D. and R. G. R. R., dist. 12 m.

Little Rock Barracks, Ark. (Dept. South).—P. O., tel. and R. R. stn. Little Rock, Ark.

**Livingston, Fort, La.* (Dept. South).—P. O. Grand Isle, La.; tel. stn. New Orleans, La.; steamer tri-weekly from New Orleans, dist. 95 m.

Lowell, Fort, Ariz. (Dept. Ariz.).—P. O. and tel. stn. Tucson, Ariz.; special conveyance from Tucson, on S. P. R. R., dist. 7 m.

Lyon, Fort, Colo. (Dept. Mo.). —P. O. same; tel. and R. R. stn. West Las Animas, Colo.; on A. T. and S. F. R. R, dist. 6 m.

Mackinac, Fort, Mich. (Dept. East).—P. O. and tel. stn. Mackinac, Mich.; boat from R. R. stn. (M. C. R. R. and G. R. and I. R. R.) at Mackinaw City, dist. 7 m., and from St. Ignace, Mich., on D. M. and M. R. R., dist. 5 m.

**Macomb, Fort, La.* (Dept. South).—P. O., tel. and R. R. stn. Chef Menteur, La., dist. 1¼ m.

**Macon, Fort, N. C.* (Dept. South).—P. O. Beaufort, N. C.; tel. stn. at post; boat from R. R. at Morehead City, N. C., dist. 2 m.

Madison Barracks, N. Y. (Dept. East).—P. O., tel. and R. R. stn. Sackett's Harbor, N. Y.

Maginnis, Fort, Mont. (Dept. Dak.).—P. O. same; tel. stn. Glendive, Mont.; stmbt. (summer) to Rocky Point, Mont. (Missouri River), dist. 53 m.; R. R. stn. Junction City, on N. P. R R., dist. 110 m. No regular conveyance either way.

Marcy, Fort, N. Mex. (Dept. Mo.).—P. O., tel. and R. R. stn. (A. T. and S. F. R. R.) Santa Fé, N. Mex.

**Marion, Fort, Fla.* (Dept. South).—P. O. and tel. stn. St. Augustine, Fla.

Mason, Fort, Cal. (Dept. Cal.).—P. O., tel. and R. R. stn. San Francisco, Cal., dist. 3 m.

**McClary, Fort, Me.* (Dept. East).—P. O. Kittery Point, Me.; tel. stn. Portsmouth, N. H.; stage twice daily from Portsmouth, dist. 4¼ m.

McDermit, Fort, Nev. (Dept. Cal.).—P. O. and tel. stn. same; stage daily from Winnemucca, on C. P. R. R., dist. 80 m.

McDowell, Fort, Ariz. (Dept. Ariz.).—P. O. and tel. stn. same; stage from Maricopa, Ariz., on S. P. R. R., via Phœnix, dist. 56 m.

McHenry, Fort, Md. (Dept. East).—P. O. and R. R. stn. Baltimore, Md.; tel. stn. at post.

McIntosh, Fort, Tex. (Dept. Tex.).—P. O., tel. and R. R. stn. Laredo, Tex.; dist. ¾ m.

McKinney, Fort, Wyo. (Dept. Platte).—P. O. and tel. stn. same; tri-weekly stage or buckboard from Rock Creek, on U. P. R. R., dist. 225 m., and from Custer Station, on N. P. R. R., dist. 160 m.

Meade, Fort, Dak. (Dept. Dak.).—P. O. and tel. stn. same; daily stage from Pierre, Dak., on C. and N. W. R. R., dist. 186 m.; and from Sidney, Nebr., on U. P. R. R., dist. 260 m.

**Mifflin, Fort, Pa.* (Dept. East).—P. O. and tel. stn. Philadelphia, Pa.; special conveyance from Paschall, on P. W. and B. R. R., dist. 5 m., or by Delaware River from Philadelphia, dist. 7 m.

Missoula, Fort, Mont. (Dept. Dak.).—P. O., tel. and R. R. stn. (N. P. R. R.) Missoula, Mont., dist. 4 m.

Mojave, Fort, Ariz. (Dept. Ariz.).—P. O. at post; R. R. and tel. stn. Powell, on A. and P. R. R., dist. 22½ m.

Monroe, Fort, Va. (Dept. East).—P. O. and tel. stn. same; steamboats daily from Baltimore, Washington, Norfolk, and New York, and railroad (C. and O.) from Richmond.

**Montgomery, Fort, N. Y.* (Dept. East).—P. O., tel. and R. R. stn. (O. and L. C. R. R.) Rouse's Point, N. Y., dist. 2 m.

**Morgan, Fort, Ala.* (Dept. South).—P. O. Herndon, Ala.; tel. stn. Mobile, Ala.; steamer tri-weekly from Mobile, dist. 30 m.

**Moultrie, Fort, S. C.* (Dept. South).—P. O. Moultrieville, S. C.; tel. and R. R. stn. Charleston, S. C., dist. 5 m.

Mount Vernon Barracks, Ala. (Dept. South).—P. O. Mount Vernon, Ala.; tel. stn. Citronelle, Ala.; Fort Stoddard ldg., on Mobile River, dist. 3 m.; no regular conveyance.

Myer, Fort, Va.—P. O. and R. R. stn. Washington, D. C.; tel. stn. at post.

Newport Barracks, Ky. (Dept. South).—P. O., tel, and R. R. stn. Newport, Ky.

Niagara, Fort, N. Y. (Dept. East).—P. O. Youngstown, N. Y.; tel. stn. Lewiston, N. Y.; stage from Lewiston, dist. 7 m.

Niobrara, Fort, Nebr. (Dept. Platte).—P. O. same; tel. stn. Valentine, Nebr.; daily stage from Valentine, Nebr., on Elkhorn Valley line of S. C. and P. R. R., dist. 4½ m.

Omaha, Fort, Nebr. (Dept. Platte).—P. O. Omaha, Nebr.; tel. stn. at post; R. R. stn. Omaha, dist. 4 m.

**Ontario, Fort, N. Y.* (Dept. East).—P. O., tel. and R. R. stn. Oswego, N. Y.

Pembina, Fort, Dak. (Dept. Dak.).—P. O. and tel. stn. Pembina, Dak.; St. Vincent, on St. P. M. and M. R. R., dist. 2 m.

**Phœnix, Fort, Mass.* (Dept. East).—P. O. and tel. stn. Fairhaven, Mass.

**Pickens, Fort, Fla.* (Dept. South).—P. O. Warrington, Fla.; tel. stn. Pensacola Navy Yard; steamer daily from R. R. at Pensacola, Fla., dist. 10 m.

**Pike, Fort, La.* (Dept. South).—P. O. same; tel. stn. Miller's Bayou, La.; boat daily from Lake Catherine Station, on N. O. and M. R. R., dist. 7 m.; steamer tri-weekly from New Orleans, dist. 25 m.

Plattsburg Barracks, N. Y. (Dept. East).—P. O., tel. and R. R. stn. Plattsburg, N. Y.

**Popham, Fort, Me.* (Dept. East).—P. O. Hunnewell's Point, Me.; tel. stn. Bath, Me.; stage or water from Bath, Me., dist. 12 m. by water, 15 m. by land.

Poplar River, Camp, Mont. (Dept. Dak.).—P. O. Poplar Creek, Mont.; tel. stn. at post; stmbt. ldg. (summer) at post and weekly buckboard from Glendive, on N. P. R. R., via Fort Buford, dist. 140 m.

Porter, Fort, N. Y. (Dept. East).—P. O., tel. and R. R. stn. Buffalo, N. Y.

Preble, Fort, Me. (Dept. East).—P. O. and tel. stn. Portland, Me.; special conveyance, by land or water, from Portland, dist. 2½ m.

Presidio of San Francisco, Cal (Dept. Cal.).—P. O. and R. R. stn. San Francisco, Cal., dist. 4½ m.; tel. stn. at post; city railway from San Francisco to near post.

**Pulaski, Fort, Ga.* (Dept. South).—P. O. and R. R. stn. Savannah, Ga., dist. 14 m.; tel. stn. Tybee Island, Ga.

Randall, Fort, Dak. (Dept. Dak.).—P. O. same; tel. stn. White Swan, Dak.; stage from Springfield, on C. M. and S. P. R. R., dist. 45 m.

Reno, Fort, Ind. T. (Dept. Mo.).—P. O. and tel. stn. same; daily stage and buckboard (alternately) from Caldwell, Kans., on Caldwell Branch A. T. and S. F. R. R., dist. 110 m.

Riley, Fort, Kans. (Dept. Mo.).—P. O. and R. R. stn. (K. P. R. R.) same; tel. stn. Junction City, Kans.

Ringgold, Fort, Tex. (Dept. Tex.).—P. O. Rio Grande City, Tex.; tel. stn. at post; stage from R. R. stn. (R. G. R. R.) at Brownsville, Tex., dist. 117 m.; and from Pena (92 m.) on T.-M. R. R.

Robinson, Fort, Nebr. (Dept. Platte).—P. O. and tel. stn. same; stage from Sidney, on U. P. R. R., dist. 120 m.

San Antonio, Tex. (Dept. Tex.).—P. O., tel. and R. R. stn. same.

San Diego Barracks, Cal. (Dept. Cal.).—P. O.; tel., R. R. stn. (C. S. R. R.), and boat ldg. San Diego, Cal.

**Sandy Hook, Fort at, N. J.* (Dept. East).—P. O., tel. and R. R. stn. and stmbt. ldg. Sandy Hook, N. J., dist. 2 m.

**Scammel, Fort, Me.* (Dept. East).—P. O., tel. and R. R. stn. Portland, Me., dist. 2 m.

Schuyler, Fort, N. Y. (Dep. East).—P. O., tel. and R. R. stn. Westchester, N. Y., dist. 3½ m.

Selden, Fort, N. Mex. (Dep. Mo.).—P. O. and R. R. stn. at post (A. T. and S. F. R. R.); tel. stn. Las Cruces, N. Mex.

**Sewall, Fort, Mass.* (Dept. East).—P. O., tel. and R. R. stn. Marblehead, Mass., dist. 1½ m.

Shaw, Fort, Mont. (Dept. Dak.).—P. O. and tel. stn. same; daily stage from Helena, Mont., on N. P. R. R., dist. 80 m.; and (summer) from stmbt. ldg., Benton, Mont., dist. 60 m.

**Ship Island, Miss.* (Dept. South).—P. O., tel. and R. R. stn. (N. O. and M. R. R.) Biloxi, Miss., dist. 15 m.; special boat to post.

Sidney, Fort, Nebr. (Dept. Platte).—P. O., tel. and R. R. stn. Sidney, Nebr., on U. P. R. R., dist. ¼ m.

Sill, Fort, Ind. T. (Dept. Mo.).—P. O. and tel. stn. same; stage or buckboard daily from Henrietta, Tex., on Ft. W. R. and D. C. R. R., dist. 65 m.

Sisseton, Fort, Dak. (Dep. Dak.).—P. O. and tel. stn. same; daily conveyance from Webster, Dak., on Hastings and Dakota Division of C. M. and St. P. R. R., dist. 23½ m.

Snelling, Fort, Minn. (Dept. Dak.).—P. O., tel., and R. R. stn. same.

Spokane, Fort, Wash. T. (Dept. Columbia).—P. O. Miles, Wash. T.; tel. stn. at post; tri-weekly stage from Spokane Falls, on N. P. R. R., dist. 65 m.

**Standish, Fort, Mass.* (Dept. East).—P. O., tel., and R. R. stn. Plymouth, Mass., dist. 4 m. by water.

Stanton, Fort, N. Mex. (Dept. Mo.).—P. O. and tel. stn. same; stage to San Antonio, N. Mex., on A. T. and S. F. R. R., dist. 113 m.

Stevens, Fort, Oreg. (Dept. Columbia).—P. O. Astoria, Oreg.; tel. stn. at post; Government steamer daily from Astoria, dist. 7 m.

Stockton, Fort, Tex. (Dept. Tex.).—P. O. and tel. stn. same; daily stage from Toyah Station, on T. P. R. R, dist. 63 m.

St. Francis Barracks, Fla.—P. O., tel., and R. R. stn. St. Augustine, Fla.

**St. Phillip, Fort, La.* (Dept. South).—P. O. "The Forts," La.; tel. stn. Quarantine, La.; steamer tri-weekly from New Orleans, dist. 73 m.

**Sullivan, Fort, Me.* (Dept. East).—P. O. and tel. stn. Eastport, Me.; stmbt. ldg. ⅝ m. from post; R. R. stn. Calais, Me., dist. 29 m.

Sully, Fort, Dak. (Dept. Dak.).—P. O. and tel. stn. same; tri-weekly stage from Pierre, Dak., on C. and N. W. R. R., dist. 25 m.

**Sumter, Fort, S. C.* (Dept. South).—P. O. Moultrieville, S. C.; tel. and R. R. stn. Charleston, S. C., dist. 5 m.

Supply, Fort, Ind. T. (Dept. Mo.).—P. O. and tel. stn. same; daily stage from Dodge City, Kans., on A. T. and S. F. R. R., dist. 96 m.

**Taylor, Fort, Fla.* (Dept. South).—P. O., tel. stn., and boat ldg. Key West, Fla.

Thomas, Fort, Ariz. (Dept. Ariz.).—P. O. and tel. stn. same; daily buckboard from Bowie Station, on S. P. R. R., dist. 65 m.

**Thornburgh, Fort, Utah* (Dept. Platte).—P. O. Ashley, Utah; tel. stn. at post; semi-weekly buckboard from Green River Station, on U. P. R. R., dist. 120 m.

Totten, Fort, Dak. (Dept. Dak.).—P. O. and tel. stn. same; tri-weekly stage from Carrington Dak., Jamestown and Northern Branch of N. P. R. R., dist. 36 m.

Townsend, Fort, Wash. T. (Dept. Columbia).—P. O. Port Townsend, Wash. T.; tel. stn. at post; special conveyance from Port Townsend, dist. 4 m.

Trumbull, Fort, Conn. (Dept. East).—P. O., tel. and R. R. stn. New London, Conn., dist. 1 m.

Uncompahgre, Cantonment on, Colo. (Dept. Mo.).—P. O. and tel. stn. same; stage from Montrose, Colo., on D. and R. G. R. R., dist. 8 m.

Union, Fort, N. Mex. (Dept. Mo.).—P. O. and tel. stn. same; daily stage or buckboard from Watrous, N. Mex., on A. T. and S. F. R. R., dist. 7 m.

Vancouver Barracks, Wash. T. (Dept. Columbia).—P. O., tel. stn., and boat ldg. at Vancouver, Wash. T.; boat from Portland, Oreg., daily.

Verde, Fort, Ariz. (Dept. Ariz.).—P. O. and tel. stn. same; tri-weekly stage and buckboard from Ash Fork, Ariz., on A. and P. R. R., dist. 97 m.

Wadsworth, Fort, N. Y. (Dept. East).—P. O. Stapleton, N. Y.; tel. stn. Quarantine, Clifton, Staten Island, N. Y.

Walla-Walla, Fort, Wash. T. (Dept. Columbia).—P. O., tel. and R. R. stn. (W. W. and C. R. R. R.) Walla-Walla, Wash. T., dist. 1 m.

Warren, Fort, Mass. (Dept. East).—P. O. and tel stn. Boston, Mass.; steamer from Boston, dist. 7 m.

Washakie, Fort, Wyo. (Dept. Platte).—P. O. and tel. stn. same; daily stage and buckboard (alternately) from Green River Station, on U. P. R. R., dist. 147 m., and from Rawlins, on U. P. R. R., dist. 135 m.
Washington Barracks, D. C. (Dept. East).—P. O., tel. and R. R. stn. Washington, D. C.
* *Washington, Fort, Md.* (Dept. East).—P. O. same; tel. stn. Alexandria, Va.; stmbt. from Washington, D. C., dist. 13 m.
Wayne, Fort, Mich. (Dept. East).—P. O. and tel. stn. Detroit, Mich.; city railway from Detroit, dist. 3 m.
West Point, N. Y.—P. O. and tel. stn. same.
Whipple Barracks, Ariz. (Dept. Ariz.).—P. O. Prescott, Ariz.; tel. stn. at post; daily stage from Ash Fork, on A. and P. R. R., dist. 54 m.; and from Maricopa, on S. P. R. R., dist. 130 m.
Winfield Scott, Fort, Cal. (Dept. Cal.).—P. O. and R. R. stn. San Francisco, Cal., dist. 5 m.; tel. stn. Presidio.
Wingate, Fort, N. Mex. (Dept. Mo.).—P. O. same; tel. and R. R. stn. (A. and P.) Wingate, dist. 3 m.
* *Winthrop, Fort, Mass.* (Dept. East).—P. O. and tel. stn. Boston, Mass.; stmbt. from Boston, dist. 2 m.
* *Wolcott, Fort, R. I.*—P. O., tel. and R. R. stn. Newport, R. I.
Yates, Fort, Dak. (Dept. Dak.).—P. O. and tel. stn. same; stage (60 m.) and stmbt. (90 m.) from Bismarck, Dak., on N. P. R. R.

ARMORIES, ARSENALS, AND RECRUITING AND ENGINEER DEPOTS.

ARMORIES AND ARSENALS.

Allegheny Arsenal, Pa.—P. O., tel. and R. R. stn. Pittsburgh, Pa.; Capt. J. W. Reilly, comdg.
Augusta Arsenal, Ga.—P. O., tel. and R. R. stn. Augusta, Ga., dist. 3 m.; Maj. W. A. Marye, comdg.
Benicia Arsenal, Cal.—P. O., tel. and R. R. stn. Benicia, Cal., dist. 1 m.; Col. Julian McAllister, comdg.
Fort Monroe Arsenal, Va.—P. O. and tel. stn. Fort Monroe, Va.; stmbts. daily from New York, Baltimore, Washington, and Norfolk, and railroad (C. and O.) from Richmond; Maj. L. S. Babbitt, comdg.
Frankford Arsenal, Pa.—P. O. and tel. stn. Philadelphia, Pa.; Bridesburg, on P. R. R., dist. ½ m.; Maj. S. C. Lyford, comdg.
Indianapolis Arsenal, Ind.—P. O., tel. and R. R. stn. Indianapolis, Ind.; Maj. Isaac Arnold, comdg.
Kennebec Arsenal, Me.—P. O., tel. and R. R. stn. Augusta, Me.; Maj. F. H. Phipps, comdg.
New York Arsenal, N. Y.—P. O. and tel. stn. Governor's Island, N. Y.; Government steamer from New York City, dist. 1½ m.; Col. T. G. Baylor, comdg.
Rock Island Arsenal, Ill.—P. O. and tel. stn. Rock Island, Ill.; special conveyance from R. R. stns. and boat ldgs. in Rock Island, Ill., and Davenport, Iowa, dist. 2 m.; Lt. Col. D. W. Flagler, comdg.
St. Louis Powder Depot, Mo.—P. O., tel., and R. R. stn. Jefferson Barracks, Mo.; Maj. J. R. McGinness, comdg.
San Antonio Arsenal, Tex.—P. O., tel., and R. R. stn. San Antonio, Tex.; Capt. J. A. Kress, comdg.
Springfield Armory, Mass.—P. O., tel., and R. R. stn. Springfield, Mass.; Lieut. Col. A. R. Buffington, comdg.
U. S. Powder Depot, N. J.—P. O., tel., and R. R. stn. Dover, N. J., dist. 5 m.; Maj. J. P. Farley, comdg.
Watertown Arsenal, Mass.—P. O., tel., and R. R. stn. Watertown, Mass.; Maj. F. H. Parker, comdg.
Watervliet Arsenal, N. Y.—P. O. and tel. stn. West Troy, N. Y.; R. R. stn. East Troy, N. Y., dist. 1¼ m.; Lieut. Col. Alfred Mordecai, comdg.

RECRUITING DEPOTS.

Jefferson Barracks, Mo.—P. O., tel., and R. R. stn. same; Col. A. G. Brackett, 3 cav., comdg.
Davids' Island, N. Y.—P. O. Pelham, N. Y.; tel. stn. New Rochelle, N. Y.; stage and boat from New Rochelle on N. Y., N. H., and H. R. R., dist. 2 m., or from Grand Central Depot, N. Y. City, dist. 19 m.; Lieut. Col. R. S. La Motte, 12 inf., comdg.
Columbus Barracks, Ohio.—P. O., tel., and R. R. stn. Columbus, Ohio; Lieut. Col. E. F. Townsend, 11 inf., comdg.

ENGINEER DEPOT.

Willets Point, N. Y.—P. O., tel., and R. R. stn. Whitestone, N. Y., dist. 2½ m.; Lt. Col. H. L. Abbott, comdg.

HEADQUARTERS OF REGIMENTS.

CAVALRY.

1. Fort Walla-Walla, Wash. T.
2. Fort Custer, Mont.
3. Whipple Barracks, Ariz.
4. Fort Bayard, N. Mex.
5. Fort McKinney, Wyo.
6. Fort Lowell, Ariz.
7. Fort Meade, Dak.
8. San Antonio, Tex.
9. Fort Riley, Kans.
10. Fort Davis, Tex.

ARTILLERY.

1. Presidio, San Francisco, Cal.
2. Washington Barracks, Washington, D. C.
3. St. Francis Barracks, Fla.
4. Fort Adams, R. I.
5. Fort Hamilton, N. Y.

INFANTRY.

1. Fort Grant, Ariz.
2. Fort Cœur d'Alene, Idaho.
3. Fort Shaw, Mont.
4. Fort Omaha, Nebr.
5. Fort Keogh, Mont.
6. Fort Douglas, Utah.
7. Fort Laramie, Wyo.
8. Angel Island, Cal.
9. Fort D. A. Russell, Wyo.
10. Fort Wayne, Mich.
11. Fort Sully, Dak.
12. Madison Barracks, N. Y.
13. Fort Wingate, N. Mex.
14. Fort Sidney, Nebr.
15. Fort Randall, Dak.
16. Fort Concho, Tex.
17. Fort Yates, Dak.
18. Fort Assiniboine, Mont.
19. Fort Clark, Tex.
20. Fort Leavenworth, Kans.
21. Vancouver Bks., Wash. T.
22. Fort Lewis, Colo.
23. Fort Union, N. Mex.
24. Fort Supply, Ind. T.
25. Fort Snelling, Minn.

ADJUTANT-GENERAL'S OFFICE,
Washington, D. C., October 15, 1883.

G.—*Statement of casualties in the United States Army during the fiscal year ending June* 30, 1883.

Organization.	Discharged.						Died.	Deserted.
	Expiration of service.	For disability.	Sentence of general court-martial.	Civil authority.	By order.			
					Minority.	Other causes.		
Divisions and departments	19	1	.....	.....	.....	35	1	2
Engineers	24	2	.....	.....	.....	5	.....	17
Ordnance	30	9	6	.....	.....	31	1	16
First Cavalry	129	16	19	.....	3	12	6	89
Second Cavalry	61	38	23	.....	3	10	5	133
Third Cavalry	72	29	32	.....	4	7	8	173
Fourth Cavalry	60	43	61	.....	12	15	18	160
Fifth Cavalry	62	22	36	.....	4	6	.....	96
Sixth Cavalry	104	49	8	.....	6	10	9	139
Seventh Cavalry	60	33	18	.....	11	10	4	124
Eighth Cavalry	83	35	21	.....	5	11	9	110
Ninth Cavalry	101	35	26	.....	2	2	5	19
Tenth Cavalry	61	25	27	.....	7	5	11	47
First Artillery	98	22	15	.....	.....	4	5	51
Second Artillery	99	18	12	.....	2	14	7	52
Third Artillery	80	23	8	.....	2	6	4	90
Fourth Artillery	83	22	13	.....	4	2	5	70
Fifth Artillery	61	26	22	.....	2	8	5	85
First Infantry	45	26	14	.....	6	10	5	70
Second Infantry	65	12	16	.....	5	7	1	27
Third Infantry	50	16	14	.....	1	4	6	82
Fourth Infantry	109	8	20	.....	2	4	4	57
Fifth Infantry	76	13	3	.....	3	11	5	77
Sixth Infantry	104	16	28	.....	1	3	.....	67
Seventh Infantry	134	12	5	.....	3	3	2	64
Eighth Infantry	34	12	19	.....	.....	8	7	38
Ninth Infantry	45	10	21	.....	2	5	3	31
Tenth Infantry	56	7	15	1	.....	7	2	56

G.—*Statement of casualties in the United States Army, &c.*—Continued.

Organization.	Discharged.						Died.	Deserted.
	Expiration of service.	For disability.	Sentence of general court-martial.	Civil authority.	By order.			
					Minority.	Other causes.		
Eleventh Infantry	90	15	10	.....	2	6	5	61
Twelfth Infantry	51	33	20	.....	3	6	4	77
Thirteenth Infantry	31	18	27	.....	7	3	4	75
Fourteenth Infantry	29	20	4	.....	2	4	2	73
Fifteenth Infantry	50	24	20	.....	5	9	7	69
Sixteenth Infantry	59	14	19	.....	2	6	6	50
Seventeenth Infantry	97	12	8	.....	3	6	2	39
Eighteenth Infantry	35	38	13	.....	4	2	1	62
Nineteenth Infantry	71	25	15	.....	2	7	8	63
Twentieth Infantry	52	17	12	.....	3	4	1	39
Twenty-first Infantry	101	24	5	.....	1	5	2	25
Twenty-second Infantry	65	24	19	.....	4	5	2	76
Twenty-third Infantry	47	20	22	.....	4	3	6	87
Twenty-fourth Infantry	43	18	12	.....	.....	4	4	4
Twenty-fifth Infantry	27	9	14	.....	1	.....	3	13
Signal Corps	70	3	2	.....	.....	56	4	1
General Service	20	170	46	4	10	44	6	289
Mounted Service	19	58	84	4	27	34	10	421
Detachments:								
West Point	25	9	.....	.....	.....	3	.....	3
Fort Leavenworth	2	2	2	.....	.....	6	3	8
Washington	7	1	.....	.....	.....	257	2	.....
General non-commissioned staff	26	11	3	.....	.....	20	1	1
Total	3,022	1,145	859	9	170	745	221	3,579

RECAPITULATION.

Discharges	5,950
Deaths	221
Desertions	3,578
Total	9,749

H.—*Statement showing the number of trials of enlisted men by general courts-martial during the fiscal year ending June 30, 1883, as far as the same have been received.*

Organization.	No.	Organization.	No.
Engineer Battalion	3	Tenth Infantry	48
Hospital stewards	9	Eleventh Infantry	24
Commissary sergeants	5	Twelfth Infantry	53
First Cavalry	74	Thirteenth Infantry	45
Second Cavalry	52	Fourteenth Infantry	31
Third Cavalry	62	Fifteenth Infantry	38
Fourth Cavalry	82	Sixteenth Infantry	36
Fifth Cavalry	61	Seventeenth Infantry	23
Sixth Cavalry	49	Eighteenth Infantry	30
Seventh Cavalry	52	Nineteenth Infantry	29
Eighth Cavalry	61	Twentieth Infantry	26
Ninth Cavalry	48	Twenty-first Infantry	22
Tenth Cavalry	52	Twenty-second Infantry	56
First Artillery	67	Twenty-third Infantry	50
Second Artillery	43	Twenty-fourth Infantry	24
Third Artillery	20	Twenty-fifth Infantry	28
Fourth Artillery	37	Thirty-second Infantry	1
Fifth Artillery	61	Signal Service	4
First Infantry	31	General service	59
Second Infantry	49	Mounted service	69
Third Infantry	43	Detachments:	
Fourth Infantry	50	West Point	7
Fifth Infantry	22	Fort Leavenworth	10
Sixth Infantry	31	Ordnance	9
Seventh Infantry	19		
Eighth Infantry	49	Total	1,888
Ninth Infantry	34		

Not included above:

Military convicts	10
Indian scouts	2

I.—*Statement of assignments of recruits and of re-enlistments during the fiscal year ending June 30, 1883.*

Organization.	Number of recruits assigned.	Re-enlistments.		
		Non-commissioned officers.	Musicians, &c.	Privates.
Divisions and departments	.....	2	.....	14
Engineers	13	1	.....	10
Ordnance	.....	6	.....	19
First Cavalry	267	4	.....	7
Second Cavalry	348	9	.....	8
Third Cavalry	291	5	.....	8
Fourth Cavalry	230	5	1	7
Fifth Cavalry	221	9	1	9
Sixth Cavalry	275	5	.....	9
Seventh Cavalry	181	5	1	10
Eighth Cavalry	287	6	1	1
Ninth Cavalry	181	8	.....	6
Tenth Cavalry	184	17	4	4
First Artillery	60	5	2	16
Second Artillery	56	8	2	39
Third Artillery	64	6	1	17
Fourth Artillery	102	5	.....	13
Fifth Artillery	63	7	1	40
First Infantry	122	2	.....	1
Second Infantry	123	1	1	1
Third Infantry	113	2	.....	1
Fourth Infantry	73	4	1	16
Fifth Infantry	116	4	.....	8
Sixth Infantry	141	5	.....	9
Seventh Infantry	161	11	.....	11
Eighth Infantry	39	1	.....	4
Ninth Infantry	121	4	.....	6
Tenth Infantry	23	2	.....	3
Eleventh Infantry	115	6	1	11
Twelfth Infantry	42	5	.....	8
Thirteenth Infantry	170	2	.....	4
Fourteenth Infantry	103	4	.....	2
Fifteenth Infantry	162	1	.....	1
Sixteenth Infantry	64	7	.....	12
Seventeenth Infantry	102	4	.....	4
Eighteenth Infantry	133	1	.....	5
Nineteenth Infantry	116	5	.....	11
Twentieth Infantry	90	4	.....	2
Twenty-first Infantry	78	7	.....	15
Twenty-second Infantry	80	4	2	11
Twenty-third Infantry	140	3	2	6
Twenty-fourth Infantry	45	1	1	7
Twenty-fifth Infantry	42	3	.....	3
Signal Corps	.....	13	.....	44
General service and depots	.....	.....	.....	164
Mounted service and depots	.....	.....	.....	84
General service, California	.....	.....	.....	76
Detachments:				
United States Military Academy	3	3	.....	17
Fort Leavenworth Military Prison	15	.....	.....	4
Washington, D. C	.....	2	.....	5
General non-commissioned staff	.....	22	.....	.....
Total	5,355	246	22	793

RECAPITULATION.

Recruits assigned	5,355
Re-enlistments:	
Non-commissioned officers	246
Musicians	22
Privates	793
Total	6,416

K.—*Table showing the nativity of enlisted men.*

General and mounted service.

Nativities.	Albany, N. Y.		Baltimore, Md.		Boston, Mass.		Buffalo, N. Y.		Chicago, Ill.		Cincinnati, Ohio.		Cleveland, Ohio.		Columbus Barracks, Ohio.	Davenport, Iowa.		David's Island, N. Y. H.	Detroit, Mich.		Harrisburg, Pa.		Indianapolis, Ind.		Jefferson Barracks, Mo.	Kansas City, Mo.		Louisville, Ky.		Milwaukee, Wis.		New York, N. Y.		Philadelphia, Pa.		Pittsburgh, Pa.		Providence, R. I.		Rochester, N. Y.		Saint Louis, Mo.		Springfield, Ill.		Washington, D. C.	
	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	General.	Mounted.	General.	General.	Mounted.	General.	Mounted.	General.	Mounted.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.	General.	Mounted.
Alabama												3			1					1	1			3			1		2				1					1				1	6				
Arizona																																															
Arkansas																							1																			2					
California	1			2						2		2								1												2	2				1	1				1	1				
Colorado	1						1																												1												
Connecticut	2		1	1	3	1	2		2	1	2	2	1	1				1		4					1							14	12	1	2			4	2			2					
Dakota															1																		1														
Delaware			1	1																1	1						1					2		7	4		1									1	1
District of Columbia			8	1			1			1		3						1			1		1										2	2	2	2	3									8	19
Florida																																1					1										1
Georgia			1						1		2	2								1			2				1		1				1			1						1			1		
Idaho																																															
Illinois	1			1	1		2		20	28	5	3	3	2	2	2	11			5			8	3	2	1	8				5	5	2	1		8		1				27	19	23	1		
Indian Territory						1																																									
Indiana	1		1		2				10	8	12	4		1	8		1			2	1		68	17			2	7	3	1	1	1	1	1	2	1	1					8	13	10			
Iowa									1	5	1			2		2	8			2	1		1	2			2					2		2	1	1	1					3	3			1	
Kansas			1									1								1							1		1													3	2	1			
Kentucky				1					1	2	19	33	1	3	2		2			2			9	12	1		5	28	31		1		1				1					4	18	6		1	
Louisiana										1										1			1		1								1	1									2	1			
Maine	2		1		20	11	2		3		1			1				1		2			1		1						1	8	2		1			8				1	1	2			1
Maryland	4		85	79	1				1	3	1	1		1	2					1	9		3				1					3	1	11	9	3	12		1			4	9	1		17	19
Massachusetts	13	1	7	2	81	41	3	3	15	14	4			5	1	1	1	1		9			6		1			1				31	16	10	10	1	1	34	4			7	8			3	3
Michigan	2			1			5	3	7	13	2	2	2	2	1		1		1	59			1	1	2		1					2	3								1	2	7				
Minnesota	1								1				1				1															2															1
Mississippi			4								1	2								1					2			1				1					1						10				
Missouri	1		1						5		1	1			1		1			1			4	1	1		4	1					1			1	3					19	16	4	4		2
Montana																											1																				
Nebraska									2					1									1								1																

Nevada																																															
New Hampshire	2				11	8	1			1				1																					1			8				1		1			
New Jersey	5		3	1	1			1	2	8		4	1		8		1			1	1		1				1					25	9	8	15	3	4					2	2				
New Mexico																																															
New York	94	9	10	9	7	2	31	26	40	37	14	12	11	13	7	1	4	8		50	8	1	9	1	3		4	1		2	7	148	76	15	13	6	6	7		4	15	14	15	10	2	7	7
North Carolina			5	4											2					1	1		3		1								1				2					1	5	1		2	5
Ohio	4		1	2	2		1		18	13	58	48	17	29	41	1	4			35			13	7	2		4	5	1		3	4	5	2		3	11		1			13	19	6	4		2
Oregon																																1														1	
Pennsylvania	4	1	24	16	2	1	8	7	22	16	14	17	6	17	12	1	3			17	59		3	3			3	3		1	3	22	7	101	95	35	63				1	14	12	6		5	6
Rhode Island			8		2				1				1	1						1												8	2		1		1	46	9			2	1			1	1
South Carolina	1		1	1							1	2																				3										1	1		1	1	
Tennessee				1					1	1	6	2					1			1			3	10				3	4								1					6	12	1		1	1
Texas				1				1	1	1	1			1				1							1							2	1									1	1				
Utah															1																	1															
Vermont	4				4		1		1	1										1			1									4		8	1		1	4	1			1	1				
Virginia			13	23				1	4	2	5	8		4		4				2	15	5	3	5				7	5			4	3	1	5	3	40	1	1			2	9			9	32
Washington Territory															1																																
West Virginia											4	6		1		1				2	1													1		1	6		1			1	1			1	
Wisconsin	1								4	12	1			1	1	1				5						1					5	1		1	1			1				1	3	1			
Wyoming																																1															
Africa	1																			1													1														
At sea																																					1										
Austria	1		1	2	1				5	4	1	6	1	1				2			1										2	7	8	1	2	1						3	1				
Australia																1																	1														
Canada	8			2	20	8	8	1	8	13	1	3	2	7	2		2	1		50			1	1	1						3	4	5	4	2	1	4	10	2		4	3	6	4	1	2	
Denmark							1	1	2	5						1	2			6					1						1	4	4			1				1		2	1				
England	14		8	6	17	5	10	6	10	13	6	6	3	10			2	1		29			5	1						1	1	66	45	21	17	6	12	30	5			2	8	2		2	2
France				1	2				1	1	1	1			1					2												7	2									1	2				
Germany	19		13	20	4	1	10	9	45	55	30	39	8	16	18	3	21	4	2	56	2	1	5	1	1			2	4		7	108	130	30	39	8	9	1			12	14	52			3	
Holland							1		1	1										2											1	1	9	1	1												
India																				1												8	1		1												
Ireland	25		12	6	92	26	10	6	30	22	9	5	8	5	3		1	1		18	5		6	1	2		2	2			2	218	78	48	46	16	20	40	5	1		16	7	4		7	
Italy																																12	1	1													
Norway									7	1		1																				2	2														
Russia	2		1					1	2		1	1		2	2		1			2	1											2	1	1	1						1		1				
Scotland	2		6	1	9			3	3	3	1		1			1				8							1					12	10	4	2	6	3	4				2	3	1		1	
South America															1																				1												
Spain																																	1	1													
Sweden	3				3		2		4	6	1	1		1						1			1									7	2		1							1	3				
Switzerland	1			3			1		2	3		6		2	1		1			9					1		2	1			1	10	9		6			1					5			1	
Wales	1				1				2																							4				1	1										
West Indies																												1				2		1	1												
Totals, white	220	10	143	143	285	100	101	68	282	288	205	188	67	121	116	16	69	22	3	392	71	2	148	42	20	2	43	52	19	5	45	761	457	281	276	100	149	194	29	6	34	179	230	85	9	65	55
Totals, colored	1	1	10	45	1			1	3	4	1	39		10	3					12	32	5	8	27	5		2	11	33			6	4		8	2	62	3	3			8	67		5	10	48
Aggregate	232		341		386		170		577		433		198		119	85		22	407		110		225		25	47		115		50		1,228		565		313		229		40		474		99		178	

K.—*Table showing the nativity of enlisted men*—Continued.

Nativities.	Corps of Engineers.		Department of the Platte.			Department of California.					Department of Texas.							Department of Arizona.			
	West Point, N. Y.	Willets Point, New York Harbor.	Fort D. A. Russell, Wyo.	Fort Douglas, Utah.	Fort Omaha, Nebr.	Benicia Barracks, Cal.	Fort Bidwell, Cal.	Fort McDermit, Nev.	Presidio of San Francisco, Cal.	San Diego Barracks, Cal.	Fort Brown, Tex.	Fort Clark, Tex.	Fort Concho, Tex.	Fort Davis, Tex.	Fort Duncan, Tex.	Fort McIntosh, Tex.	San Antonio, Tex.	Fort Grant, Ariz.	Fort Huachuca, Ariz.	Fort Lowell, Ariz.	Whipple Barracks, Ariz.
Alabama																	2			1	
Arizona																					
Arkansas												1									1
California									4					1			1				
Colorado																					
Connecticut									1								2				
Dakota																				1	1
Delaware									2												
District of Columbia					1		1		2												
Florida																					
Georgia													1				1				
Idaho																					
Illinois			2	1	10				2								4				
Indian Territory																					
Indiana			1		9				1			1				1	3				
Iowa			3		5	1											1				
Kansas																					
Kentucky					3				1				1				4			1	1
Louisiana														2	1		3				
Maine			1		2				1								1			1	
Maryland			2	2	3	1			2				1	1			3				
Massachusetts		1	1	2	3				8								2			1	1
Michigan			4	1	1				1								1				
Minnesota																					
Mississippi									1								3				
Missouri			1		4				4			1					2				
Montana																					
Nebraska					2																

Nativities.	Department of Dakota.																		
	Fort A. Lincoln, Dak.	Fort Assinaboine, Mont.	Fort Buford, Dak.	Camp on Poplar River, Mont.	Cantonment Bad Lands, Dak.	Fort Custer, Mont.	Fort Ellis, Mont.	Fort Keogh, Mont.	Fort Maginnis, Mont.	Fort Meade, Dak.	Fort Missoula, Mont.	Fort Pembina, Dak.	Fort Randall, Dak.	Fort Shaw, Mont.	Fort Sisseton, Dak.	Fort Snelling, Minn.	Fort Sully, Dak.	Fort Totten, Dak.	Fort Yates, Dak.
Alabama																			
Arizona																			
Arkansas																			
California							2												
Colorado																			
Connecticut															1				
Dakota																			
Delaware																			
District of Columbia																			
Florida																			
Georgia										1									
Idaho																			
Illinois	2						1	2							1	4		1	
Indian Territory																			
Indiana		1													1	4			
Iowa								1		2			1						
Kansas																			
Kentucky																3			
Louisiana																1			
Maine														1	1				
Maryland						1			1	2						1	1		
Massachusetts	2		2					1		3	1	1				8			
Michigan		1					1	1								4			
Minnesota										1						4			
Mississippi																1			
Missouri		1						1								2			
Montana																			
Nebraska																			

Nevada																																								
New Hampshire					1				1								1				1															1	1			
New Jersey		1	1	1	1				1								3				1							1												
New Mexico																																								
New York	7	5	7	2	9	3		1	21		1	2	2	1			13					3	2		1	1	4	1	6	1	1	2			2	2	15			1
North Carolina													1										1																	
Ohio			4	1	7				7								6			3		2	2	1				1	2			1					9		1	
Oregon									1																															
Pennsylvania		1	4		6	1	1		9			1		1			7			1	1	1		3	1			2			1	1		1		1	5	1		2
Rhode Island									3			1																												
South Carolina																																					2			
Tennessee				1													5						1																	
Texas														1			3														1									
Utah				3																																				
Vermont					2												1												1											
Virginia			1		2				1				1				1							1							1						1			
Washington Territory																																								
West Virginia			3		3												1												1								1			
Wisconsin					1				1											1		1		1				1	1								3			
Wyoming																																								
Africa																							1																	
At sea									1																															
Austria				1	3				1												1			1					1								1			
Australia																																								
Canada			1		1				2								1								1		1	1	1		2	1	2				3			1
Denmark				1	9				2											1		1															3			
England		1	1	1	7				7			1					6		1		1	2					1	2	4						1		4		1	1
France				1					3													1									1			1						
Germany		7	9	4	22	1	1		34				2				27		1	4	2	2	3	1			3	2	9	2	6				1	1	9			
Holland									2																												1			
India																				1																	1			
Ireland	2	2	7		14	1			24	1	1	3		2			11	1		4	2	2		3	2		2	1	3		2	1	1				6			1
Italy				1													1																							
Norway				1					1													1						1	1								2			
Russia			1		1							1					1																			1				
Scotland									1			1					3							1					2											
South America																																								
Spain																																								
Sweden					2												2						1														3			
Switzerland		1			1				3								4																				2			
Wales																													1											
West Indies																																								
Total	9	19	54	24	135	8	3	1	156	1	2	13	9	9	1	1	130	1	2	20	13	20	14	14	5	1	12	17	39	4	24	7	4	3	5	10	104	2	3	6
Aggregate	28		213			169				165								36				294																		

K.—*Table showing the nativity of enlisted men*—Continued.

Nativities.	Department of the Columbia.																				Department of the Missouri.																				Total, general service and colored infantry.	Total, mounted service and colored cavalry.	Total, Corps of Engineers.	Total, Department of the Platte.	Total, Department of California.	Total, Department of Texas.	Total, Department of Arizona.	Total, Department of Dakota.	Total, Department of the Columbia.	Total, Department of the Missouri.	Aggregate.
	Boise Barracks, Idaho.	Fort Canby, Wash.	Fort Cœur d'Alene, Idaho.	Fort Colville, Wash.	Fort Klamath, Oreg.	Fort Lapwai, Idaho.	Fort Spokane, Wash.	Fort Stevens, Oreg.	Fort Townsend, Wash.	Vancouver Barracks, Wash.	Fort Walla Walla, Wash.	Fort Bayard, N. Mex.	Fort Bliss, Tex.	Fort Craig, N. Mex.	Fort Garland, Colo.	Fort Gibson, Indian Territory.	Fort Hays, Kans.	Fort Leavenworth, Kans.	Fort Lewis, Colo.	Fort Lyon, Colo.	Fort Marcy, N. Mex.	Fort Reno, Indian Territory.	Fort Riley, Kans.	Santa Fé, N. Mex.	Fort Stanton, N. Mex.	Fort Supply, Indian Territory.	Fort Union, N. Mex.	Fort Wingate, N. Mex.																						
Alabama											1		1					1																															2	26
Arizona																																																	5
Arkansas																																																	26
California										2																																							3
Colorado																																																	68
Connecticut																																																	4
Dakota						1															1																											24
Delaware												1																																					57
District of Columbia																																																	3
Florida																																																	21
Georgia										1				1																																			
Idaho																								1																									
Illinois			2										1	1				9				2						2																					238
Indian Territory													1											1																									2
Indiana				1						2			1		1			3		1		1		3																							223
Iowa																		4																															60
Kansas										1								2		1																													14
Kentucky														1				3																															203
Louisiana																		2																															19
Maine																																																	79
Maryland											1	1						2																															261
Massachusetts											1		1					2																															385
Michigan																		2																															138
Minnesota																																																		13
Mississippi																																																		25
Missouri																		7				1		2																									105
Montana																																																		1
Nebraska																																																		7

Nevada																																							
New Hampshire	1										1										1								19	6		1	1	1	1	2	2	1	34
New Jersey		1					1						1								1						1		54	42	1	3	1	3	1	1	2	3	111
New Mexico																																							
New York			1						1	5	1	1	2	2				12	8	2		1	2	1		1	2		449	321	12	18	25	19		42	8	29	928
North Carolina																	1	1		1									15	19				1		1		3	39
Ohio			1						1	2	1		3					9		2		1	2	1				1	189	190		12	7	6	8	19	5	19	450
Oregon											2																		2				1				2		5
Pennsylvania	1					1				2	2	1	1		1			8		8			2		1	1			342	288	1	10	11	9	2	19	6	13	701
Rhode Island										1			1																64	17			8	1			1	1	87
South Carolina													1		1														8	5						2		2	17
Tennessee											1							8		1			1						21	34		1		5		1	1	10	73
Texas																						2							6	7				4		1		2	20
Utah																		1											2			3						1	6
Vermont										1								2											23	6		2		1		1	1	2	36
Virginia			1							2			3		1			4											70	145		3	1	2		3	3	8	235
Washington Territory																													1										1
West Virginia																		1											10	17		6		1		2		1	37
Wisconsin																		1											14	27		1	1		1	7		1	52
Wyoming																													1										1
Africa																													1	2						1			4
At sea																														1			1						2
Austria										1	1				1													1	25	26		4	1		1	3	2	2	64
Australia																													1	1									2
Canada										2			1					2		1									78	115		2	2	1		13	2	4	217
Denmark									1																				12	21		10	2		1	4	1		51
England	1									1	2		2		1			5		2	2						2		204	168	1	9	7	7	2	16	4	14	432
France																		2		1							1		13	9		1	3			3	14	4	47
Germany	3		3	1	2	1			1	2	1		5	1	2		1	14		1	4	1					1	4	329	473	7	35	36	29	7	39		34	989
Holland																													4	14			2			1			21
India																													3	3					1	1	14		22
Ireland	1		8				1			7	2	1	4		1	1		4	1	2	5	1				2	2		553	252	4	21	26	17	7	24		24	928
Italy																													13	1		1		1					16
Norway																												1	9	4		1	1			5		1	21
Russia																													12	11		2		2		1			28
Scotland										1					1														53	34			1	4		3	1	1	97
South America																													1	1									2
Spain																													1	1									2
Sweden																		5											22	15		2		2		4		5	50
Switzerland	1								1									2								1			18	48	1	1	3	4		2	2	3	82
Wales																													9	1						1			11
West Indies																													4	1									5
Totals	11	1	11	1	2	8	3	1	6	35	20	4	29	7	10	2	2	112	4	20	19	7	15	8	2	6	14	8	3,509	3,159	28	218	169	165	86	294	94	264	7,931
Aggregate	94											264																	7,931										

K 1.—*Table showing the occupations of enlisted men.*

Occupations.	GENERAL AND MOUNTED SERVICE.																								CORPS OF ENGINEERS.		DEPARTMENT OF THE PLATTE.		
	Albany, N. Y.	Baltimore, Md.	Boston, Mass.	Buffalo, N. Y.	Chicago, Ill.	Cincinnati, Ohio.	Cleveland, Ohio.	Columbus Barracks, Ohio.	Davenport, Iowa.	David's Island, New York Harbor.	Detroit, Mich.	Harrisburg, Pa.	Indianapolis, Ind.	Jefferson Barracks, Mo.	Kansas City, Mo.	Louisville, Ky.	Milwaukee, Wis.	New York City.	Philadelphia, Pa.	Pittsburgh, Pa.	Providence, R. I.	Rochester, N. Y.	Saint Louis, Mo.	Springfield, Ill.	Washington, D. C.	West Point, N. Y.	Willets Point, N. Y.	Fort D. A. Russell, Wyo.	Fort Douglas, Utah.	Fort Omaha, Nebr.
Architects	1																	1							1					1
Bakers	3	8	3	2	7	13	2	2			8				1	2	1	28	14	3	2		8		2			1	1	
Barbers	1	7	3		6	4	2	1			5	3	2			1		12	6		6		4	2	2			1		5
Blacksmiths	4	11	2	5	11	13	5	3	2		9		3		1	3		25	7	2	2		16	1	3			2	1	4
Boiler-makers	1		1		1	1		1			1						1	7	2	2									
Book-binders			1			2				1			2					4	1											
Brick-layers		1	3		3	1	1					1						3	9	3		1						1		
Broom-makers						2	1				1				1				2											
Butchers	4	4	2	4	12	7	3	2	3		6		3		1		1	18	7	3	1		3	1	3					
Cabinet-makers and upholsterers	1	2	4	2	3	2		1			1							3	2			1	2							1
Carpenters	6	11	5	3	22	10	5	3	1		14	1	3		4	5	1	32	14	3	5	2	8		4				1	4
Calkers																														
Chair-makers			1	1		7										1		2				1	2							
Cigar-makers	2	1	1	1	6	24		4	1		3		3		1			7	2					1						
Clerks	14	20	7	14	46	22	4	3	2	1	15	2	2	1		3	2	99	32	5	6	2	26		10			3	5	4
Cooks		5	2	1	10	1	2				4		1			2		14	5	2	1		8		1			2	1	1
Coopers			2			1					4		2			2		8	5	1	1		5							
Dentists								1					1										1							
Draughtsmen					2																				1					
Druggists			2		1	1	1	2			4		1			1		8	2	1			2		1					2
Electrotypers																		2		2				1						
Farmers	18	20	10	22	39	47	10	10	25		32		55	2	5	5	2	47	29	11	4	6	37	24	16		2	2	2	19
Farriers			1																											
Gardeners	1		1		3	2		1			2		1			1		11	2				2	1	1					3
Glass-blowers			1			1					1						1													
Grocers	1						2											1												
Hatters	1	1		1							1								3				1							
Jewelers			2	1	2	1		1										4		1	3		2							
Laborers	98	120	151	49	104	131	99	27	33		126	98	102	7	22	60	14	316	178	207	145	13	172	46	64	3		21	3	27
Locksmiths				2	1						1		1					2	2				1							
Machinists and engineers	3	8	8	5	21	4	9	2	3	2	5	1	1			3	2	26	12	7	2	1	7	1	1					2
Millers				1	1	1					1							1	2					1	1					1

Miners	1	1	1	....	4	1	....	3	....	....	1	....	1	....	....	....	....	4	4	6	....	....	1	5	....	....	....	1	....	3
Molders	4	8	5	3	8	10	4	1	1	....	15	....	....	....	....	1	1	16	10	1	1	1	2	1	....	....	....	....	1	1
Musicians	1	4	9	1	18	5	2	10	....	8	10	....	2	....	....	1	1	57	9	6	2	....	11	....	5	....	6	2	2	....
Painters	5	11	6	5	16	19	7	3	1	....	16	....	4	....	1	8	2	23	14	10	7	....	13	1	1	....	....	1	....	2
Photographers	....	....	....	1	....	2	....	....	....	....	1	....	....	....	....	....	....	2	....	....	1	....	....	....	....	....	....	....	....	....
Plasterers	2	....	3	2	2	1	....	....	1	....	....	....	....	....	....	....	....	1	1	....	....	....	2	....	1	....	....	....	....	....
Plumbers and gas-fitters	....	2	4	1	3	1	....	1	....	....	3	....	....	....	....	....	....	8	5	1	....	....	....	1	....	....	1	....	....	....
Porters	1	....	....	....	1	....	....	....	....	....	2	....	....	....	....	....	....	16	4	....	....	....	4	....	....	....	....	....	....	1
Printers	3	4	5	1	10	1	....	1	1	....	3	....	3	....	2	....	....	18	4	2	3	....	3	....	3	....	1	....	....	1
Puddlers	2	....	1	....	....	2	1	1	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	1	....	....	....	....	....	....
Rope-makers	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....
Saddlers and harness-makers	1	1	....	....	6	6	2	....	....	....	4	....	1	....	1	1	....	3	3	....	1	....	3	....	....	....	....	....	....	1
Sail-makers	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	....	....	....	....	....	....	....	....	....
Sailors	2	16	9	5	15	1	7	....	....	....	17	....	1	....	1	....	3	31	8	1	5	1	....	....	3	....	....	....	....	....
Salesmen	2	2	1	....	24	....	1	....	....	....	5	....	1	....	....	....	....	12	5	....	....	1	8	....	....	....	....	....	....	2
School-teachers	2	1	....	1	3	3	....	1	....	....	8	....	2	....	....	....	1	6	4	1	....	....	2	....	1	....	....	....	....	1
Shoemakers	2	7	19	3	14	11	6	....	....	....	11	....	....	....	....	2	....	17	16	3	3	3	8	1	2	1	1	1	....	2
Soldiers	6	32	20	3	30	21	2	18	2	9	9	3	14	7	2	2	....	102	31	5	4	....	46	2	22	4	7	13	2	33
Stenographers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....
Stone-masons	3	2	5	2	6	3	2	....	....	....	5	....	....	....	1	....	1	10	2	....	2	1	4	1	....	....	....	....	....	1
Tailors	4	10	6	2	8	5	2	1	....	....	7	....	1	1	....	....	2	13	16	1	2	1	4	1	2	....	....	....	1	1
Teamsters and hostlers	9	10	37	10	32	18	6	5	4	....	19	1	3	....	2	5	3	77	24	8	11	2	27	2	1	....	....	3	4	3
Telegraph operators	....	....	....	....	4	2	1	....	....	....	....	....	....	....	1	....	....	1	2	2	....	....	2	1	1	....	....	....	....	....
Tinners	2	1	....	....	4	3	2	3	....	....	6	....	1	1	....	....	....	8	6	2	....	....	2	1	3	....	....	....	....	....
Turners	....	....	....	....	....	2	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Veterinary surgeons	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Waiters	....	....	2	1	5	3	2	....	....	....	2	....	1	1	....	1	....	17	3	1	1	....	2	....	11	1	....	....	....	....
Weavers	2	....	9	1	1	1	....	1	....	....	....	....	....	....	....	....	....	3	20	....	6	....	....	....	....	....	....	....	....	....
Wheelwrights	....	....	1	1	....	....	....	2	....	....	....	....	....	....	....	....	1	....	1	....	....	....	1	....	....	....	....	....	....	1
Miscellaneous	19	13	29	12	62	14	5	5	5	1	23	....	7	5	....	5	10	94	81	9	2	3	22	2	11	...	1	....	....	8
Totals	232	341	386	170	577	433	198	119	85	22	407	110	225	25	47	115	50	1,228	565	313	229	40	474	99	178	9	19	54	24	135
Average age in years and months	23 8½	23 10	25 3	24 7½	25 6	23 6	24 3	24 7	24 1	31 1	25 5	22 8	23 6	26 9	23 6	23 8	24 9	25 1	25 8½	24 1	25	23 6	23 2	24 6	26 11	29 5	30 7	29 11	27 4	26 11
Average height in feet and inches	5 7⅓	5 6⅔	5 7⅓	5 6⅓	5 5⅓	5 6¾	5 6¾	5 7⅓	5 7½	5 6⅓	5 6⅔	5 6⅝	5 6¾	5 6½	5 8⅓	5 7¾	5 7⅝	5 7	5 7⅓	5 6¾	6 6⅓	5 6⅓	5 6⅝	5 6⅝	5 7⅞	5 6½	5 7¾	5 7⅝	5 7	5 8⅓

K1.—*Table showing the occupations of enlisted men*—Continued.

Occupations.	DEPARTMENT OF CALIFORNIA.					DEPARTMENT OF TEXAS.							DEPARTMENT OF ARIZONA.				DEPARTMENT OF DAKOTA.														
	Benicia Barracks, Cal.	Fort Bidwell, Cal.	Fort McDermit, Nev.	Presidio of San Francisco, Cal.	San Diego Barracks, Cal.	Fort Brown, Tex.	Fort Clark, Tex.	Fort Concho, Tex.	Fort Davis, Tex.	Fort Duncan, Tex.	Fort McIntosh, Tex.	San Antonio, Tex.	Fort Grant, Ariz.	Fort Huachuca, Ariz.	Fort Lowell, Ariz.	Whipple Barracks, Ariz.	Fort A. Lincoln, Dak.	Fort Assinaboine, Mont.	Fort Buford, Dak.	Camp on Poplar River, Mont.	Cantonment Bad Lands, Dak.	Fort Custer, Mont.	Fort Ellis, Mont.	Fort Keogh, Mont.	Fort Maginnis, Mont.	Fort Meade, Dak.	Fort Missoula, Mont.	Fort Pembina, Dak.	Fort Randall, Dak.	Fort Shaw, Mont.	Fort Sisseton, Dak.	Fort Snelling, Minn.
Architects																															
Bakers				1								4			2							1	1	1							2
Barbers				5								1			1																2
Blacksmiths				2				1				2											1	1			1				
Boiler-makers												1												1							
Book-binders				1																											1
Brick-layers																															
Broom-makers																															
Butchers				1								1		1		1															1
Cabinet-makers and upholsterers												1					1														1
Carpenters				1	1							2			1		1		1				1	1		1	1				2
Calkers																															
Chair-makers																															
Cigar-makers												1																			1
Clerks	1			8				1				8			1			1					2	1							8
Cooks				1				1				6			1	1	1		1					2							3
Coopers												1																			
Dentists																															
Draughtsmen																															1
Druggists	1			1				1				2				2	1			1											2
Electrotypers																															
Farmers	1			6											1		3						2	1				1		4	9
Farriers												1																			
Gardeners												3																			
Glass-blowers												1																			
Grocers																															
Hatters																															1
Jewelers																															
Laborers				20		1	4	3	1		1	44			1		5	2				2	1	6		7	2		1		1	24
Locksmiths							1					1																			1
Machinists and engineers				2								2				1							1	1							7
Millers				1								2																			1

Miners																																2
Molders																																2
Musicians		1		4			1					4				1	1	1			1	1				1			1	2		1
Painters	1									1		3					1						1									
Photographers																																
Plasterers																																
Plumbers and gas-fitters												1																				
Porters				3								1																				
Printers				1								1			1	1								1								
Puddlers	1																															
Rope-makers																																
Saddlers and harness-makers				1								4					1			1					1						1	
Sail-makers																																
Sailors				3								2																				1
Salesmen				1																												
School-teachers																							1	1								
Shoemakers				2			1					1			1								2	1				1		1		2
Soldiers	2	2	1	82		1	2	1	6			16	1	1	7	8	4	9	11	8		8	2	19	2	12	2		1	1	3	20
Stenographers																																
Stone-masons							1		1			1												1		1						1
Tailors				3					1						1	1		1								1						1
Teamsters and hostlers	1			1			3	1				4				1			1					1	1	1						3
Telegraph operators																											1	1				1
Tinners												1			1								1					1				
Turners																																
Veterinary surgeons																																
Waiters				3																												
Weavers																																
Wheelwrights																																
Miscellaneous				2								7			1	1	1						1								1	3
Totals	8	3	1	156	1	2	13	9	9	1	1	130	1	2	20	13	20	14	14	5	1	12	17	39	4	24	7	4	3	5	10	104
Average age in years and months	31 4	28 6	30	30 5	38	29 10	25 4	30 3	38 6	30	30	25 10	37 3	31 7	31	33 4	26 10	28 2	30 11	32 8	31	31 10	25 8	27 5	28 1	30 4	27 3	25 6	23 7	28 6	29 1	25 6
Average height in feet and inches	5 7¾	5 8	5 5	5 6⅓	5 6⅛	5 9⅜	5 6¾	5 6⅓	5 5⅜	5 5	5 6⅔	5 7⅓	5 7⅔	5 6⅛	5 6½	5 8⅛	5 7⅔	5 8	5 8⅓	5 6½	5 10⅔	5 7¼	5 7⅓	5 7⅔	5 8	5 6	5 6½	5 7	5 8⅛	5 7⅓	5 6¾	5 7⅘

K 1.—*Table showing the occupations of enlisted men*—Continued.

Occupations.	DEPARTMENT OF DAKOTA.			DEPARTMENT OF THE COLUMBIA.											DEPARTMENT OF THE MISSOURI.																Totals.
	Fort Sully, Dak.	Fort Totten, Dak.	Fort Yates, Dak.	Boise Barracks, Idaho.	Fort Canby, Wash.	Fort Cœur d'Alene, Idaho.	Fort Colville, Wash.	Fort Klamath, Oreg.	Fort Lapwai, Idaho.	Fort Spokane, Wash.	Fort Stevens, Oreg.	Fort Townsend, Wash.	Vancouver Barracks, Wash.	Fort Walla Walla, Wash.	Fort Bayard, N. Mex.	Fort Bliss, Tex.	Fort Craig, N. Mex.	Fort Garland, Colo.	Fort Gibson, Ind. T.	Fort Hays, Kans.	Fort Leavenworth, Kans.	Fort Lewis, Colo.	Fort Lyon, Colo.	Fort Marcy, N. Mex.	Fort Reno, Ind. T.	Fort Riley, Kans.	Santa Fé, N. Mex.	Fort Stanton, N. Mex.	Fort Supply, Ind. T.	Fort Union, N. Mex.	Fort Wingate, N. Mex.	
Architects														2				1			2			1							4
Bakers												1	1																	1	129
Barbers													1	1																	86
Blacksmiths													1	1										1							146
Boiler-makers																															20
Book-binders																														1	14
Brick-layers																					1										28
Broom-makers																															7
Butchers				1																									1		95
Cabinet-makers and upholsterers																					1										29
Carpenters				1												1					2				1						185
Calkers																															15
Chair-makers																															60
Cigar-makers																					1										404
Clerks		2							1				1			5	2				7		2	3							83
Cooks																		1			1				1						34
Coopers						1											1														3
Dentists																															4
Draughtsmen																															41
Druggists																							1								5
Electrotypers																					11			1	1	2					550
Farmers	1			1										2		1			1		1										3
Farriers																															35
Gardeners																															5
Glass-blowers																															4
Grocers																															9
Hatters																															17
Jewelers																															2,643
Laborers		1		2		2			1				2	4		11		4			25		8	6	1	9			2	2	1	15
Locksmiths													1								1										

Machinists and engineers	....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	1	....	....	....	....	3	....	....	1	....	2	....	....	....	....	....	160
Millers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	14
Miners	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....	....	....	....	1	....	1	....	2	43
Molders	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	95
Musicians	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	8	....	....	....	....	....	....	....	....	1	....	208
Painters	....	..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	2	2	....	....	....	....	....	....	....	1	....	190
Photographers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7
Plasterers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	17
Plumbers and gas-fitters	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	32
Porters	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	33
Printers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	76
Puddlers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	11
Rope makers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6
Saddlers and harness-makers	....	....	....	....	....	1	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	46
Sail-makers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5
Sailors	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	....	1	....	....	....	1	....	....	1	....	1	....	....	....	....	....	139
Salesmen	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	66
School-teachers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	36
Shoemakers	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	149
Soldiers	1	....	6	8	1	7	1	1	2	2	....	3	22	6	2	2	1	2	1	1	29	2	4	4	3	1	1	2	3	7	3	796
Stenographers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Stone-masons	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	58
Tailors	....	....	....	1	....	....	....	....	....	....	....	....	....	....	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	105
Teamsters and hostlers	....	....	....	1	....	....	....	1	....	....	....	....	1	....	....	1	....	....	....	1	7	....	2	1	....	....	1	....	....	....	....	360
Telegraph operators	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	21
Tinners	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	51
Turners	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4
Veterinary surgeons	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Waiters	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	58
Weavers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	44
Wheelwrights	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	10
Miscellaneous	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	2	....	....	....	....	....	....	....	....	1	....	420
Totals	2	3	6	11	1	11	1	2	3	3	1	6	35	20	4	29	7	10	2	2	112	4	20	19	7	15	3	2	6	14	8	7,931
Average age in years and months	29 6	22 4	32 4	30 10	36	31 1	38 2	31 6	33 2	32 3	34 6	36 3	33 4	27	25 8	28 10	27 11	26 11	29	28 10	27 8	30 10	27 6	29 8	28 2	25 2	26	32 8	26 11	33 5	26 8	......
Average height in feet and inches	5 7½	5 5	5 8	5 7⅜	5 9¼	5 5⅜	5 8½	5 7	5 7	5 8	5 8¾	5 6¼	5 7½	5 7⅜	5 7	5 8	5 8½	5 7	5 9¼	5 10	5 7⅜	5 5¼	5 8½	5 7⅛	5 7½	5 7¼	5 6⅞	5 7	5 8	5 7⅜	5 9	......

K 2.—*Table showing the cause of rejection.*

Cause of rejection.	Albany, N. Y.	Baltimore, Md.	Boston, Mass.	Buffalo, N. Y.	Chicago, Ill.	Cincinnati, Ohio.	Cleveland, Ohio.	Columbus Barracks, Ohio.	Davenport, Iowa.	David's Island, New York Harbor.	Detroit, Mich.	Harrisburg, Pa.	Indianapolis, Ind.	Jefferson Barracks, Mo.	Kansas City, Mo.	Louisville, Ky.	Milwaukee, Wis.	New York City.	Philadelphia, Pa.	Pittsburgh, Pa.	Providence, R. I.	Rochester, N. Y.	Saint Louis, Mo.	Springfield, Ill.	Washington, D. C.	West Point, N. Y.	Fort D. A. Russell, Wyo.	Fort Douglas, Utah.	Fort Omaha, Nebr.
Over age	45	44	18	13	104	55	16	2	13	....	4	10	29	....	3	....	7	192	25	27	31	4	21	1	....	....	....	2	3
Minors	62	158	133	62	482	108	69	26	13	....	83	49	132	5	5	....	21	879	57	74	59	13	59	5	13	....	....	....	8
Married men	43	33	26	16	60	22	8	2	22	....	18	14	68	....	5	....	1	118	21	31	33	16	13	....	2	....	....	....	2
Widowers with children	4	....	....	4	3	3	2	....	2	....	2	....	....	....	....	....	....	4	....	....	....	....	3	....	....	....	....	....	....
Under height	84	63	41	50	139	89	40	4	9	....	20	21	59	....	7	....	19	280	86	27	32	13	49	3	14	1	....	2	1
Over height	....	..	21	....	63	39	....	1	21	....	5	..	5	....	3	....	5	17	10	3	....	1	1	....	2	....	....	....	....
Under weight	1	36	27	50	27	2	....	6	....	....	3	....	15	....	....	....	10	65	21	....	16	..	17	3	2	....	....	....	1
Over weight	....	2	22	5	23	27	1	....	....	....	1	....	5	....	....	....	6	20	13	1	....	....	10	1	1	....	....	....	....
Moral disability	1	7	....	....	27	1	1	1	3	....	....	....	1	....	....	....	....	55	11	3	....	....	3	....	3	....	....	4	5
Mental disability	7	3	1	....	8	11	6	....	....	....	3	....	....	....	1	....	1	24	8	4	....	....	10	1	2	..	....	....	1
Discharged without character	1	....	....	....	8	1	1	1	....	....	....	....	....	....	3	....	....	8	1	....	....	....	13	....	....	....	....	....	....	....
Imperfect knowledge of English	21	75	10	32	506	132	62	12	51	....	51	13	11	3	1	1	30	1,082	104	107	13	6	73	1	4	....	1	....	....
General unfitness	29	11	288	48	421	100	39	10	5	1	39	25	21	5	6	3	8	1,433	135	84	37	11	92	8	10	....	2	....	6
Intemperance	176	129	280	52	236	73	20	10	23	....	45	23	78	....	10	....	13	715	135	44	76	20	25	2	6	....	....	....	10
Deserters	....	....	....	....	1	....	8	....	1	....	....	....	....	....	....	....	....	5	1	....	....	....	....	....	....	....	....	....	....
Defective vision	38	49	109	40	157	68	34	6	9	....	25	11	29	1	7	....	15	332	113	39	32	6	39	7	8	....	....	1	....
Defective hearing	7	3	7	2	1	7	1	1	1	....	....	....	....	....	....	....	....	22	10	10	6	....	1	....	....	....	....	....	....
Defective teeth	13	13	70	17	28	8	12	1	3	....	....	2	1	....	2	....	....	65	30	9	11	....	7	2	13	....	1	....	1
Paralysis	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hare-lip	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Deficient chest	11	7	193	21	4	7	1	1	....	....	....	2	....	....	1	....	....	101	2	28	1	1	18	....	2	....	....	....	....
Loss of fingers	7	....	....	6	11	3	3	1	2	....	2	....	2	....	1	....	....	17	3	2	7	1	2	....	1	....	....	....	1
Deformed legs	3	13	....	1	3	1	1	....	2	....	1	2	1	....	....	....	1	3	1	1	1	2	3	....	1	....	....	....	1
Defective feet	7	2	39	25	13	27	5	4	11	....	3	....	7	....	6	1	2	51	21	16	6	11	27	13	4	....	1	....	1
Stammering	1	2	....	2	2	3	1	....	....	....	....	4	1	....	....	....	....	2	1	....	....	....	1	....	....	....	....	....	....
Curvature of spine	....	....	2	1	5	16	....	3	....	....	5	4	1	....	1	....	....	4	12	2	....	....	24	1	3	....	....	....	1
Rheumatism	....	....	....	1	1	1	....	....	....	....	2	....	1	....	....	....	....	6	....	1	....	....	2	....	....	....	....	....	....
Heart disease	1	2	....	11	58	2	....	6	....	....	9	....	2	....	3	2	....	30	18	6	2	....	38	....	17	....	....	4	....

Catarrh	2			1		2															1									
Epilepsy																			2			1	1							
Eczema																		4					3					1		
Scrofula	5	7	2	2	9	6					3		3		1			4	11	2			10							1
Periostitis																			4											
Frostbitten																		3					2							
Fractures	1				6	1	2	1			1		4		1		1	13	3	3			5	1						
Gunshot wounds						1																			1					
Enlarged spleen																														
Hernia	1	59	5	5	48	17	5	1	1		7	2	9		2	1	6	84	68	10	9	1	32	4	10			1		2
Phthisis		11	2	2	4			1			3						1	9	1			1	1					1		
Hydrocele	1	1		1		2											4		1	1	5				4					
Varicocele	12	12		25	131	81	31	10	1		12	9				2	4	110	14	30	21	2	63	2	47					4
Cirsocele	2	3	64	1				1	1			5			6		3	2		24	7	1	2							
Varicose veins	16	63	25	17	165	52	26	3	1		33	6	62		3	1	9	236	74	51	23	2	84	9	6			4		8
Hemorrhoids	10	3	14	8	17	32		5	5		5	7	15		3		1	41	33	35	9	1	47	2	3			1		
Indurated glands						1		1																						
Stricture of urethra																														
Atrophy of testicles		1		1	2	3		1			1					1		13			2	2			1					
Syphilis	4	39	12	15	60	25	2	7	3		16	5	20			4	2	215	168	11	19	1	29	3	17					
Gonorrhea	2	1		3	1	15	2	1						1				14	4		1		20		7					
Asthma									1										1											
Ulcers	1		2		2	3																	1							
Phymosis			1																2				2							
Bronchitis																														
Fistula																	1	1		1										
Loss of discharge		3				8																								
Previous discharge for disability							1												1				6							
Totals	569	855	1,415	540	2,838	1,055	400	130	205	1	402	214	582	15	81	16	171	6,284	1,286	686	459	117	855	69	204	1	5	21	57		

K 2.—*Table showing the cause of rejection*—Continued.

Cause of rejection.	Presidio of San Francisco, Cal.	San Diego Barracks, Cal.	Fort Clark, Tex.	Fort Duncan, Tex.	San Antonio, Tex.	Fort Lowell, Ariz.	Whipple Barracks, Ariz.	Fort Abraham Lincoln, Dak.	Fort Keogh, Mont.	Fort Meade, Dak.	Fort Randall, Dak	Fort Shaw, Mont.	Fort Snelling, Minn.	Fort Sully, Dak.	Fort Totten, Dak.	Fort Townsend, Washington Ter.	Vancouver Barracks, Washington Ter.	Fort Walla Walla, Washington Ter.	Fort Bayard, N. Mex.	Fort Bliss, Tex.	Fort Craig, N. Mex.	Fort Gibson, Indian Ter.	Fort Hays, Kans.	Fort Leavenworth, Kans.	Fort Lyon, Colo.	Fort Marcy, N. Mex.	Fort Riley, Kans.	Fort Wingate, N. Mex.	Totals.
Over age	....	....	....	....	3	....	1	....	....	....	....	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	676
Minors	....	....	....	....	4	1	....	1	....	....	....	....	2	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	2,585
Married men	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	575
Widowers with children	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	27
Under height	....	....	....	....	2	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1,107
Over height	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	197
Under weight	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	302
Over weight	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	139
Moral disability	....	....	....	....	1	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	131
Mental disability	2	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	96
Discharged without character	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	37
Imperfect knowledge of English	2	....	....	1	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,410
General unfitness	28	....	....	....	5	....	1	....	....	....	....	....	....	1	1	1	....	3	....	....	....	....	....	11	1	....	2	....	2,931
Intemperance	3	....	....	....	4	....	2	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	1	....	2,213
Deserters	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	16
Defective vision	....	1	1	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	3	1	....	1	1	1,189
Defective hearing	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	81
Defective teeth	5	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	2	....	....	....	....	318
Paralysis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Hare-lip	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Deficient chest	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	2	....	....	....	3	....	....	....	....	402
Loss of fingers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	72
Deformed legs	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	48
Defective feet	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	304
Stammering	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	21
Curvature of the spine	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	85
Rheumatism	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	15
Heart disease	5	....	....	....	5	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	2	2	....	....	....	225

Catarrh					1																								6
Epilepsy																													5
Eczema																													8
Scrofula										1															1				68
Periostitis																													4
Frostbitten										1																			6
Fractures																													43
Gunshot wounds																													2
Enlarged spleen					1																								1
Hernia	1									1	1		1				1		1	1					1				398
Phthisis																													37
Hydrocele					1																								21
Varicocele									1															2	2				628
Cirsocele																													122
Varicose veins	3								1				2											4	1				990
Hemorrhoids	1																							1					359
Indurated glands																													2
Stricture of urethra																													....
Atrophy of testicles																		1											29
Syphilis	4				1				1	1			2						1		1			2	2				692
Gonorrhea																													72
Asthma																													2
Ulcers																								1					10
Phymosis																													5
Bronchitis																		1											1
Fistula																													3
Loss of discharge																													11
Previous discharge for disability																													8
Totals	54	1	1	1	42	1	8	1	3	4	1	1	12	1	2	2	1	6	2	3	4	1	1	31	13	2	5	1	19,738

2.—REPORT OF THE INSPECTOR-GENERAL.

HEADQUARTERS OF THE ARMY,
INSPECTOR-GENERAL'S OFFICE,
Washington, D. C., October 27, 1883.

SIR: I have the honor to submit, for the information of the honorable Secretary of War and the General of the Army, the following report of the operations of the Inspector-General's Department.

The number, rank, and station of the officers of this department remain the same as at the date of my last annual report.

The undersigned has continued in charge of the office at these headquarters, performing the various duties pertaining thereto, and has also made reports on the special subjects which have been referred to this office by the Secretary of War.

Inspector-General Nelson H. Davis has remained on duty as inspector-general of the Military Division of the Missouri. He has made such investigations and inspections, under the orders of the Lieutenant-General commanding, as the necessities of the service required; and has also, under directions from the Secretary of War, made the quarterly inspections of the Leavenworth Military Prison, provided for by section 1348, Revised Statutes.

Assistant Inspector-General Roger Jones has continued on duty as inspector-general of the Military Division of the Atlantic, and has been actively engaged in making investigations and inspections, under the orders of the major-general commanding.

Assistant Inspector-General Absalom Baird has continued on duty in this office as my assistant. In addition to his regular current duties, he has examined the money accounts of various disbursing officers of the Army stationed in this city, Baltimore, Pittsburgh, Harrisburg, and Norfolk, and has also made several investigations under orders of the Secretary of War.

Assistant Inspector-General Joseph C. Breckinridge has been on duty as inspector-general of the Military Division of the Pacific. In addition to his regular duties at those headquarters, he has made and completed a careful inspection of all the posts in the Department of the Columbia, on which duty he was engaged, under orders from the division commander, at the date of my last annual report.

It will be seen that the officers of the Inspector-General's Department are actively engaged at these headquarters, and at the headquarters of the three military divisions, leaving none of them available for assignment to the eight departments; and it has been deemed necessary to continue on duty as acting assistant inspector-generals the line officers specified below.

The law approved June 23, 1874, reorganizing the several staff corps of the Army, after enumerating the number and rank of officers of the Inspector-General's Department, says:

> The Secretary of War may, in addition, detail officers of the line, not to exceed four, to act as assistant inspectors-general: *Provided*, That officers of the line detailed as acting inspectors-general shall have all the allowances of cavalry officers of their respective grades. (Supplement to Revised Statutes, Vol. 1, page 100.)

The four officers detailed under this act, and the orders so detailing them, are as follows:

Maj. John J. Coppinger, Tenth Infantry, to headquarters Department of the Missouri, by Special Orders No. 162, Adjutant-General's Office, July 12, 1879.

Lieut. Col. Edwin C. Mason, Fourth Infantry, to headquarters Department of the Platte, by Special Orders No. 191, Adjutant-General's Office, August 18, 1882.

Capt. Thomas Ward, First Artillery, to headquarters Department of the East, by Special Orders No. 267, Adjutant-General's Office, November 15, 1882.

Capt. Robert P. Hughes, Third Infantry, to headquarters Department of Dakota, by Special Orders No. 61, Adjutant-General's Office, March 15, 1883.

At the four remaining departments, officers have been placed in charge of the acting assistant inspector-general's office, by authority of the respective department commanders, as follows:

Department of Arizona: Maj. Abraham K. Arnold, Sixth Cavalry.

Department of the South: Maj. Francis L. Guenther, Second Artillery.

Department of Texas: Capt. George B. Russell, Ninth Infantry.

Department of the Columbia: Maj. Oliver D. Greene, assistant adjutant-general.

All the above-named officers have been busily engaged in inspecting the garrisoned posts within their respective departments, examining the money accounts of disbursing officers of the Army, and performing, under the orders of the department commanders, the duties pertaining to the inspection branch of the service, all of which have been executed with a zeal and fidelity worthy of commendation.

In compliance with the requirements of the act of Congress approved April 20, 1874, inspections have been made of the accounts of all officers of the Army who have disbursed public money during the year. The funds received and expended, with balances reported due to the United States, have been compared and verified by official statements from the Treasury and designated depositories, and by careful examination of the check-books, vouchers, &c., of the disbursing officers.

These examinations show that the public funds appropriated for Army purposes have generally been disbursed properly. One exception is noted, where official action has been taken and the offender convicted and sentenced to the penitentiary.

The reports of all these inspections are submitted herewith, for transmittal to Congress, as required by the law above referred to.

Thorough inspections have been made, during the past year, of nearly all the garrisoned posts in the United States, by regular and acting officers of this department, and, in compliance with paragraph 1327, Army Regulations, the commanding officers of the several posts have rendered reports of inspection of their respective commands. These reports, after receiving the notes and remarks of local and superior commanders in regard to any action taken or required, have been forwarded to this office. Here these reports receive a careful scrutiny, and extracts therefrom are furnished to the proper authorities of all subjects demanding further action.

From an examination of the annual reports of the division and department inspectors, as well as of the inspection reports above mentioned, I am enabled to present the following facts concerning the condition of the military establishment:

The business of the several supply departments has been excellently administered, the supplies being ample and of good quality. The health of the troops has been generally good. Improvements have been made and are contemplated in clothing for the soldier, under the able administration of the Quartermaster's Department, which has also maintained good and sufficient transportation for the Army. As

regards discipline and military bearing of the troops, a steady improvement over former years is shown, and the same remark also applies to target practice.

Military instruction continues to be seriously interfered with by the almost constant employment of troops at fatigue and mechanical labor.

It appears that the post schools have not been a success generally; few enlisted men attend, but the attendance of children has been fair. Early in this fiscal year, many or most of the post schools were closed for want of money for compensation of teachers.

At the Leavenworth Military Prison the condition of the buildings, hospital, grounds, &c., is good; and the management, in respect to discipline, police, messing, work, and humane and just punishment, is most excellent.

Inspector-General N. H. Davis, in his annual report, thus sums up the condition of the *personnel* and *matériel* of the service in the Division of the Missouri:

The health, police, and discipline are good. Instruction in drills and target practice has generally been regularly given with satisfactory improvement; it has to a great extent been very marked in target and skirmish practice, thus increasing much the efficiency of the troops as combatants upon the field of battle. The draft upon the troops, in some commands, for detached service, and for work as laborers and mechanics, has materially interfered with and interrupted the discharge of their military duties. The percentage on extra and daily duty at many posts is large.

The public buildings are in as good condition as the circumstances of the service and the means available therefor permit. New buildings are needed, old ones want repairing, and others in use are reported unfit for occupation.

The concentration of the troops into larger commands at a less number of military posts, with good and sufficient shelter to properly cover them and protect the public property, will obviate the necessity of going on from year to year patching dilapidated buildings, erecting temporary structures, and improvising mongrel habitations of shanty and canvas with the labor of our soldiers, and result in economy to and efficiency in the military service; it will improve the *esprit de corps* and promote the well-being of the Army. There are in this division sixty-nine posts and sub-posts at which the troops are distributed.

On the subject of desertion, Colonel Davis also remarks as follows:

As the result of considerable investigation of this subject, it appears that the prime cause of so much desertion in our Army is the employment of so many soldiers as laborers and mechanics, and this in addition to the military service required of them; it is work and drill, guard and detached service, with too little recreation and time to themselves; they work frequently side by side with civilians at the same kind of labor for less pay, the latter having the time to themselves out of the eight hours daily work. And the idea prevails that this compulsory labor is a breach of the contract with the Government when the man enlisted; objection is made to both soldiering and working, exclusive of the ordinary garrison fatigue duty, at the same time.

Other causes may be, the occasional enlistment of men who intend to desert, the sudden change of life of the recruit in the matter of restraint, duties, and punishments to which he is subjected, the temptations of better pay and greater freedom sometimes presented to the soldier.

If the condition of the military service and causes for desertion above given are correctly reported, and the changed condition in the life of the people from whom the Army is recruited that have taken place in the past thirty or forty years are recognized, the remedies for desertion, in a great measure, would, it seems, naturally suggest themselves.

It is suggested that some of the remedies referred to are:

That there should be a provision of law by which the recruit should be retained at a depot and carefully instructed in all the duties of a soldier, under the command of a judicious officer, before he joins his company; for which purpose authority should exist to enlist, say, 1,000 men in excess of the legalized active strength of the Army.

That there should be larger commands, better quartered, with more facilities for social recreations and amusements, mental and physical.

That the pay of privates, corporals, sergeants, and first sergeants of the line should be increased to, say, $15, $20, $25, and $30 respectively.

That the practice of employing soldiers at constant labor discontinue, and the troops, both officers and men, be restricted to the duties which more properly pertain to their profession.

The Army should hold that high position of honor, trust, and efficiency, that it will command the respect and support of the people. A republic should have intelligent, educated, and patriotic soldiers. It must keep abreast with the progress of the age. The smaller the Army, the more necessity for increasing its efficiency.

Our country of fifty millions of people, with their vast interests, cannot afford to dispense with an efficient military organization, if the people would have that protection of life and property that they expect and may rightfully claim from the Government. It is poor economy to save a few dollars at the expense of efficiency; but this work is not, in the end, economy. Let us have less of the pick and shovel, and more of the saber and musket.

Maj. J. J. Coppinger, acting assistant inspector-general, Department of the Missouri, furnishes the following views on the same subject:

I am of opinion that, as a rule, company commanders treat their men with much consideration and kindness. Their comfort is much dependent on the good conduct and well-being of their men. Self-interest alone would prompt kind treatment; the old "knock down and drag out" school has passed away. Sergeants are perhaps occasionally injudiciously harsh, but cause for desertion need not be looked for in direct ill treatment by company commanders.

Of course we must expect some desertions, but the number of ours is, I think, greatly increased by the vast amount of labor imposed on our men, labor which they regard as breach of contract. They enlist as soldiers; they are too often worked as laborers. With the restraint of the first, they do the work of the latter, road-making, ditching, building, teaming, extra-duty work, without extra-duty pay. Working, perhaps, side by side with some authorized citizen mechanic receiving $60 per month and a ration, and this often near mining sections on the frontier, where laborers command $2 to $3 per day, mechanics $4, the temptation is frequently too strong for them. I would give them extra-duty pay for extra-duty work.

Our system of pay, too, is injudicious. Payments running two months beget thriftless lavishness; lavishness begets drunkenness; drunkenness begets desertion. Would it not be better to allow the men a small sum for pocket money once a week, and hold the balance of their pay until expiration of term of service? This would afford at once an inducement to good conduct, as well as a sum worth investment for their future benefit, in lieu of the two-monthly driblets, too often squandered in drinking saloons, to the prejudice of discipline. Company commanders can easily carry out this if authorized, without injury to the pay corps. The matter is at least worth some consideration.

Attention is invited to the views of Assistant Inspector-General J. C. Breckinridge, on the subject of the artillery arm of the service, as follows:

The *personnel* of the artillery arm is very specially affected by the changes of this year. Officers who have been its ornaments for years leave it for the retired list, with a sense of scant reward for services which have given them more than a national reputation.

The five regiments of artillery seem a sufficient force to be entitled to a brigadier-general, and every artillerist is aware how much their service would be improved if a brigadier-general were given a special and direct supervision over them. Greater dash and aggressiveness were never more demanded of the artillery than now. A nation whose young men are not seasoned soldiers will, when driven into civilized warfare, find its artillery of the utmost importance as a "stable element in battle."

Our light or horse batteries have no commisioned officers permanently attached to them now, and so our "company father" is but a step-father at best. There is no field officer in command with us, nor a first and second captain, as in the English horse artillery, and pity 'tis 'tis true.

I desire again to call attention to the subject of increasing the number of officers in this department. The bills which were introduced in both houses of Congress last session, providing for such increase, failed to become a law, owing, in a great measure, to the shortness of the session.

This increase has been approved and recommended by the honorable Secretary of War and the General of the Army. I can see no reason why this measure should meet with objection from any source, and I recommend that the matter be again properly presented to Congress; and I think the members will see and appreciate the importance and usefulness of the Inspector-General's Department, and the necessity for more officers therein.

In my annual report of last year I made the following remarks, and the importance of this subject, in my opinion, justifies me in quoting them at this time:

The department now consists (as the law is construed) of five officers only. Eight officers, in addition, are detailed from the line for duty therein; the services of this number being indispensable for the proper performance of the duties of the department. Could it be increased by five officers, selected from the Army solely for their known gentlemanly and soldierly qualities, the department would be made independent, self-reliant, and efficient, and would be rendered in the highest degree useful and beneficial to the military service.

The detail of the eight officers for duty in the department deprives the regiments to which they belong of their services, and on many occasions when much needed.

It appears to me no more than reasonable and wise that the department should be composed of a sufficient number of efficient and energetic officers for the full and proper performance of its duties; and that regiments should not be deprived of their most valuable officers by details that detach them permanently from their legitimate duties with their regiments.

The following extracts from annual reports of inspecting officers show the necessity for some permanent arrangement for clerks for those officers. From that of Inspector-General Davis:

The need of more and suitable clerical aid in the discharge of their necessary official duties is reported by the department inspectors. But for the clerical assistance furnished my office by the courtesy of the chief quartermaster of the division, it would have been impossible for me personally to have performed the clerical work demanded by the discharge of my official duties. No clerk is allowed me. In the discharge of their official duties inspectors report upon the *personnel* as well as the *materiel* of the Army; great care and exactness is required of them; they have many papers to examine and much writing that cannot be delegated in the first instance, but copies of which have to be made. At present there is an unjust discrimination made in the Army against inspecting officers in regard to the proper and necessary clerical assistance. Appropriations, either directly or indirectly, as incidental expenses for the Quartermaster's Department, should be made to supply this want.

From that of Assistant Inspector-General J. C. Breckinridge:

The necessity for a clerk to each officer of the Inspector-General's Department is too evident to require more than mention to any one acquainted with the service and honestly desiring its good. This necessity has probably been admitted always. But now that the duties of the inspectors-general have been so greatly extended, and been made, if possible, more delicate and exacting by the examination of every variety of accounts in addition to their former specially military duties, it becomes more and more incumbent that this clerk shall be authorized, and that his position be dignified to the utmost as one of responsibility and trust. Is there any other officer in the service, of equal rank or performing such important duties, who is left so illy supplied with clerical assistance as the inspectors-general? When the inspector-general is absent on duty, who is the authorized custodian of his office records? I am sure that this matter has already received attention, and as there are but a few inspectors-general in the entire Army, it is only reasonable to expect that they may be as well supplied as others.

From that of Maj. J. J. Coppinger, acting assistant inspector-general:

I would earnestly invite attention to the necessity for a clerk, properly enlisted or hired, for the office of the acting assistant inspector-general here. I am allowed, by courtesy, the service of one clerk to do the work of the office of instructor of musketry as well as the inspector's; a force totally inadequate to deal with the mass of papers which are piled up on him, which are already sadly in arrears.

All other branches of the staff of the Army are provided in some way with the necessary clerical assistance, but for the officers of the Inspector-General's Department no provision whatever is made. The officers of this department are gentlemen of rank and many years' service, and there is much tedious clerical work that such officers should not be required to perform individually. Copying reports of inspections and investigations, keeping up the records of an office, &c., is properly

the work of a clerk, and in every inspector's office there is much of this kind of labor to be performed.

I urgently recommend that some steps be taken to place the Inspector-General's Department on an equal footing, in this respect, with other staff departments.

Respectfully submitted.

D. B. SACKET,
Brigadier and Inspector-General, U. S. A.

The ADJUTANT-GENERAL, UNITED STATES ARMY.

3.—REPORT OF LIEUTENANT-GENERAL SHERIDAN.

HEADQUARTERS MILITARY DIVISION OF THE MISSOURI,
Chicago, Ill., October 17, 1883.

GENERAL: I have the honor to submit, for the information of the General of the Army, this, my annual report, accompanied by the reports of the department commanders, and the report of the commanding officer District of New Mexico. These reports give in detail the operations of the troops for the past year, and contain so many suggestions and recommendations pertinent to the discipline and administration of this command, that I am left but little to say beyond what they have presented. There have been many difficulties in the division during the past year, but none of a serious nature. The outlook is favorable for a peaceful condition for the coming one.

Since my last annual report, dated October 20, 1882, no change has taken place in the organization of the division, which consists of the Departments of Dakota, the Platte, the Missouri and Texas.

The Department of Dakota is commanded by Brig. Gen. Alfred H. Terry, and comprises the State of Minnesota and the Territories of Dakota and Montana. It is garrisoned by nineteen permanent posts and a camp at Poplar River, Montana.

The Department of the Platte is commanded by Brig. Gen. O. O. Howard, and comprises the States of Iowa and Nebraska, the Territories of Wyoming and Utah, and a portion of Idaho. It contains eleven permanent posts.

The Department of the Missouri is commanded by Maj. Gen. John Pope, and comprises the States of Illinois, Missouri, Kansas, and Colorado, the Indian Territory and the Territory of New Mexico, together with the posts of Fort Elliott and Fort Bliss, Tex. The department is garrisoned by twenty permanent posts, and a camp on the Uncompahgre River, in Colorado.

The Department of Texas consists of the State of Texas, and is commanded by Brig. Gen. C. C. Augur. The garrisons include eight permanent posts, one of which—Fort Stockton—has been ordered abandoned, and seven camps and sub-posts along the southwestern frontier.

To garrison the military posts in this division, there are now seven regiments of cavalry, nineteen regiments of infantry, four batteries of light artillery, and 154 Indian scouts, aggregating 14,343 officers and men, distributed as follows:

Department of Dakota—two regiments of cavalry (less one company at the school of application at Fort Leavenworth), 1,330; seven regi-

ments of infantry (less one company at the school of application at Fort Leavenworth), 3,039; one battery of light artillery, 63; 59 Indian scouts; total, 4,491.

Department of the Platte—one regiment of cavalry, 765; four regiments and six companies of infantry (less one company at the school of application at Fort Leavenworth), 2,029; one battery of light artillery, 69; 4 Indian scouts; total, 2,867.

Department of the Missouri—two regiments and three troops of cavalry (three of which comprise the garrison of the school at Leavenworth), 1,676; five regiments and seven companies of infantry (three of which comprise the garrison of the school at Leavenworth), 2,702; one battery of light artillery, 64; and 51 Indian scouts. Stationed at the school of application for cavalry and infantry, at Fort Leavenworth, Kansas—besides companies belonging to other departments of this division, viz, Troops G, Seventh Cavalry, 57, and M, Eighth Cavalry, 57; Companies A, Fourth Infantry, 49, and G, Eleventh Infantry, 51; there are also one troop of the Third Cavalry and one company of the First Infantry, both of which belong to regiments transferred in 1882 to the Division of the Pacific. Total strength of troops in the Department of the Missouri, 4,493; and in addition to which, one lieutenant from each of the cavalry and infantry regiments of the Army is detailed for instruction at the school.

Department of Texas—two regiments of cavalry (less one company at the school of application at Fort Leavenworth), 1,508; two regiments of infantry, 891; one battery of light artillery, 53; and 40 Indian scouts; total, 2,492.

The troops in the Department of Dakota have been very active in controlling incursions from Canadian Indians and half-breeds who cross the boundary line for hunting, trading, or horse-stealing purposes. They have been met each time by the troops and arrested or driven over the border, with the loss, occasionally, of some of their property, and when they had erected tents they were burned. I am led to believe that in the course of time these predatory incursions will cease.

The Northern Pacific Railroad has been completed, which now gives to that large territorial command a speedy means of transportation from its eastern to its western boundary lines. The post of Fort Stevenson and the camp at Bad Lands were abandoned during the year, having fulfilled all the conditions for which they were established.

Military affairs in the Department of the Platte have been peaceful during the past year. The posts of Fort Hall and Fort Cameron were abandoned, as it was thought that the settlements about them had grown so strong that the population needed no further protection. Forts McKinney, Laramie, Robinson, and Niobrara are the picket posts in this department; they are near the Indians and can be rapidly re-enforced from the stations along the Union Pacific Railroad.

Fort McKinney covers the extensive cattle range east of the Big Horn Mountains, including Powder River. Forts Laramie and Robinson are sentinels over the large collection of Indians at the Pine Ridge Agency, and Fort Niobrara has the same bearing on the Rosebud Agency.

The recommendations of Captain Adams on re-enlistments, presented in the report from the Department of the Platte, are worthy of careful consideration.

In the Department of the Missouri to watch the Navajoes and Mescaleros has required considerable activity from the troops, and last fall the raid of the Apaches in Arizona was followed by the operations of a

command, under Lieut. Col. George A. Forsyth, in the southwestern corner of New Mexico, to protect and guard the settlers in that section and in Arizona on the adjacent border, the details of which will be found, as well as all other movements of troops in the department, fully set forth in the department commander's report.

The ugly difficulty in the Creek Nation, which threatened bloodshed, was quieted by sending troops to Ockmulgee, where subsequently commissioners came and settled on terms of peace to which both sides agreed. We have at the town of Ockmulgee a small force, and will for some time be obliged to maintain it at that point in the Creek Nation.

The school of application for infantry and cavalry, at Fort Leavenworth, has succeeded admirably, and its value as a good practical school will soon be felt in the Army. I fully indorse the recommendations of General Pope about the school.

There has been unusual quiet in the Department of Texas, and the use of troops for protection against Indians will soon cease, but new interests are growing up by the construction of new lines of railroads into Mexico, and the International line of the Rio Grande does now and will continue to demand our attention. The post of Fort Duncan and a few minor camps have been given up during the past year.

In reference to desertion, in my opinion, the excess beyond the ordinary ratio comes from the mining, railroad, cattle, and agricultural development of what may be called the frontier. Many young men in the Eastern and Middle States, wanting to better their condition by getting out to the frontier, and not having money enough to reach this Eldorado, enlist in the Army for the purpose of getting there at the Government's expense. That is their real object. They get out to military posts in this way, and to make it more easy for their consciences in deserting their flag, they complain of the ration, the work they have to do, and then desert, thus accomplishing the object they had in view when they enlisted. The communities to which they go are in sympathy with this class, shield them, and do not consider it a crime to desert. It was the same in California in the old mining days, men enlisting in the East with no other object in view than to get out to the Pacific coast, deserting on their arrival there and going to the mines.

For many years we have been obliged to keep a large number of small posts in the Indian country, which have greatly added to the cost of the service. The extension of railroads in all directions over the vast region between the Missouri River and the Rocky Mountains now affords an opportunity for concentration, and for some time the process of abandoning these small posts has been going on. In consequence the standard of discipline and efficiency is increased and economical results are anticipated.

Officers and men throughout the division have taken the deepest interest in marksmanship, and the improvement shown by the reports is most gratifying. I cannot too earnestly recommend a continuance of the allowance of ammunition for target practice, and the liberal expenditure of money to carry out the prescribed rifle competitions will meet with the best results.

Generals Pope, Howard, Terry, and Augur have ably and economically administered their respective departments, and I herewith submit their annual reports for details of information.

The officers of the supply departments throughout the division are entitled to credit for efficiency. The important branches of the service which are in their control have been economically administered during

the year, and the health and comfort of the officers and men thereby improved.

I have the honor to be, general, very respectfully, your obedient servant,

P. H. SHERIDAN,
Lieutenant-General Commanding.

Brig. Gen. R. C. DRUM,
Adjutant-General, United States Army, Washington, D. C.

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3 A.—REPORT OF BRIGADIER-GENERAL TERRY.

HEADQUARTERS DEPARTMENT OF DAKOTA,
Fort Snelling, Minn., October 8, 1883.

SIR: I have the honor to submit the following report of the military operations which have taken place in this department since the 6th day of October, 1882, the day on which my last annual report was made. At that time the force in the department consisted of the following-named troops: Light Battery F, Fourth Artillery; the Second Cavalry; the Third Infantry; the Seventh Infantry; the Seventeenth Infantry; the Seventh Cavalry; the Fifth Infantry; the Eleventh Infantry; the Eighteenth Infantry; the Twenty-fifth Infantry.

These troops were at the time distributed to posts and stations as follows:

At Fort Snelling, Minn., the regimental headquarters and Companies C, H, and K, Seventh Infantry, and Light Battery F, Fourth Artillery.

At Fort Sisseton, Dak., Companies F and I, Seventeenth Infantry.

At Fort Pembina, Dak., Companies A and E, Seventh Infantry.

At Fort Totten, Dak., Troops I and K, Seventh Cavalry, and Company C, Seventeenth Infantry.

At Fort Randall, Dak., the regimental headquarters and Companies B, F, G, and I, Twenty-fifth Infantry.

At Fort Hale, Dak., Companies C and E, Twenty-fifth Infantry.

At Fort Sully, Dak., the regimental headquarters and Companies A, D, I, and K, Eleventh Infantry.

At Fort Bennett, Dak., Company E, Eleventh Infantry.

At Fort Yates, Dak., the regimental headquarters and Companies A, D, and H, Seventeenth Infantry, and Troops B and D, Seventh Cavalry.

At Fort Meade, Dak., the regimental headquarters, and Troops A, C, E, H, and M, Seventh Cavalry, and Companies A, D, H, and K, Twenty-fifth Infantry.

At Fort Abraham Lincoln, Dak., Companies B and F, Seventh Infantry, and Companies B and G, Seventeenth Infantry.

At Cantonment Bad Lands, Dak., Company D, Seventh Infantry.

At Fort Stevenson, Dak., Companies G and I, Seventh Infantry.

At Fort Buford, Dak., Troops F and L, Seventh Cavalry, and Companies C and H, Eleventh Infantry.

At Camp Poplar River, Mont., Companies B and F, Eleventh Infantry.

At Fort Keogh, Mont., the regimental headquarters, and Companies A, B, C, D, E, F, G, and H, Fifth Infantry, and Troop E, Second Cavalry.

At Fort Custer, Mont., the regimental headquarters, and Troops C,

F, G, I, and M, Second Cavalry; Companies I and K, Fifth Infantry, and Companies E and K, Seventeenth Infantry.

At Fort Assinniboine, Mont., the regimental headquarters, and Companies A, B, C, D, E, F, H, and K, Eighteenth Infantry, and Troops H and L, Second Cavalry.

At Fort Shaw, Mont., the regimental headquarters, and Companies A, F, G, and K, Third Infantry.

At Fort Maginnis, Mont., Troops A, B, and K, Second Cavalry, and Companies G and I, Eighteenth Infantry.

At Fort Ellis, Mont., Troop D, Second Cavalry, and Companies C and E, Third Infantry.

At Fort Missoula, Mont., Companies B, D, H, and I, Third Infantry.

With the exception of the arrival in this department of the Fifteenth Infantry from the Department of the Missouri, and the departure of the Seventh Infantry to the Department of the Platte, the regiments serving in the department remain unchanged, but various changes, which will be spoken of hereafter, have been made and the resulting distribution is as follows;

At Fort Snelling, Minn., the regimental headquarters, and Companies B, C, F, and I, Twenty-fifth Infantry, and Light Battery F, Fourth Artillery.

At Fort Sisseton, Dak., Companies F and I of the Seventeenth Infantry.

At Fort Pembina, Dak., Companies B and I of the Fifteenth Infantry.

At Fort Totten, Dak., Troop I of the Seventh Cavalry, and Company C of the Seventeenth Infantry.

At Fort Randall, Dak., the regimental headquarters, and Companies A, C, D, and H of the Fifteenth Infantry.

At Fort Hale, Dak., Companies E and G of the Twenty-fifth Infantry.

At Fort Sully, Dak., the regimental headquarters, and Companies A, D, E, and K of the Eleventh Infantry,

At Fort Bennett, Dak., Company I of the Eleventh Infantry.

At Fort Yates, Dak., the regimental headquarters, and Companies B, D, and H of the Seventeenth Infantry, and Troops B and D of the Seventh Cavalry.

At Fort Meade, Dak., the regimental headquarters, and Troops A, C, E, H, K, and M of the Seventh Cavalry, and Companies A, D, H, and K of the Twenty-fifth Infantry.

At Fort Abraham Lincoln, Dak., Companies G and K of the Fifteenth Infantry, and Companies A and G of the Seventeenth Infantry.

At Fort Buford, Dak., Troops F and L of the Seventh Cavalry, and Companies C and H of the Eleventh Infantry, and Companies E and F of the Fifteenth Infantry.

At Camp Poplar River, Mont., Companies B and F of the Eleventh Infantry.

At Fort Keogh, Mont., the regimental headquarters, and Companies A, B, C, D, E, F, G, and H of the Fifth Infantry, and Troop E of the Second Cavalry.

At Fort Custer, Mont., the regimental headquarters, and Troops F, G, H, I, and L of the Second Cavalry, and Companies I and K of the Fifth Infantry, and Companies E and K of the Seventeenth Infantry.

At Fort Assinniboine, Mont., the regimental headquarters, and Companies A, B, C, D, E, F, H, and K of the 18th Infantry, and Troops C and M of the Second Cavalry.

At Fort Shaw, Mont., the regimental headquarters, and Companies A, G, H, and K of the Third Infantry.

At Fort Maginnis, Mont., Troops A, B, and K of the Second Cavalry, and Companies G and I of the Eighteenth Infantry.

At Fort Ellis, Mont., Troop D of the Second Cavalry, and Companies C and E of the Third Infantry.

At Fort Missoula, Mont., Companies B, D, F, and I of the Third Infantry.

The following tables show the strength of the several garrisons at the date of the returns for August, the last received at these headquarters:

DISTRICT OF MONTANA.

Posts.	Officers.	Enlisted men.	Indian scouts.
Fort Assinniboine	36	472	20
Fort Shaw	18	135	.....
Fort Maginnis	17	242	.....
Fort Ellis	10	136	.....
Fort Missoula	13	154	.....
Total	94	1,139	20

INDEPENDENT POSTS.

Fort Snelling	23	277	.....
Fort Sisseton	7	87	4
Fort Pembina	8	83	.....
Fort Totten	7	98	.....
Fort Randall	18	173	.....
Fort Hale	6	91	.....
Fort Sully	18	135	1
Fort Bennett	4	43	5
Fort Yates	22	239	9
Fort Meade	39	579	.....
Fort Abraham Lincoln	13	133	.....
Fort Abraham Lincoln Ordnance Depot	1	5	.....
Fort Buford	21	260	3
Camp Poplar River	6	64	3
Fort Keogh	33	421	5
Fort Custer	35	476	8
Total	261	3,164	38

GRAND TOTAL.

District of Montana	94	1,139	20
Independent Posts	261	3,164	38
Total	355	4,303	58

The following is a general record of events during the year:

October 12, 1882, Troop L, Seventh Cavalry, First Lieutenant Garlington commanding, broke up camp on Little Missouri River, Mont., and proceeded to join its new station (Fort Buford), arriving there October 19, 1882.

October 14, 1882, Troop K, Seventh Cavalry, was relieved from duty at Fort Totten, and commenced its march to Fort Meade, arriving at the latter post November 21, 1882.

October 14, 1882, First Lieut. Wm. Gerlach, Third Infantry, with a detachment of the Third Infantry, left Fort Missoula for Thompson, Mont., the scene of the late strike of the Northern Pacific Railroad laborers, to render assistance in quelling the disturbance made by the

strikers; but the timely arrival of troops from Fort Cœur d'Alene, Idaho, and Fort Vancouver, Wash., having had the effect to restore order, Lieutenant Gerlach returned to his station October 20.

October 17, 1882, Company I, Eleventh Infantry, was relieved from duty at Fort Sully and left that post to take station at Fort Bennett, relieving Company E, Eleventh Infantry; the latter company leaving Fort Bennett the same day to take station at Fort Sully.

October 19, 1882, Company I, Fifth Infantry, was relieved from temporary duty at Terry's Landing and returned to its station, Fort Custer, Mont.

October 22, 1882, Company H, Fifth Infantry, was relieved from temporary duty at Fort Custer and returned to its station, Fort Keogh, Mont.

October 30, 1882, Second Lieut. A. J. Griffiths, Second Cavalry, with a detachment of thirteen enlisted men, left Fort Custer to repair the military telegraph lines from that post to Indian Creek, on the Coulson road. On November 6, 1882, Lieutenant Griffiths was accidentally killed by being thrown from his horse, 30 miles west from Fort Custer, and was buried at the latter post with military honors on November 8, 1882. (Second Lieutenant Wilson, Fifth Infantry, left Fort Custer November 9, and took charge of the repair party.)

November 2, 1882, Second Lieutenant Sage, Fifth Infantry, and ten enlisted men of the Fifth Infantry, left Fort Keogh and proceeded to Cantonment Bad Lands for temporary duty until the latter post should be abandoned.

November 2, 1882, Second Lieutenant Kerr, Seventeenth Infantry, and fifteen enlisted men of the Seventeenth Infantry, left Fort A. Lincoln and proceeded to Fort Stevenson for temporary duty until the arrival of the companies of the Fifteenth Infantry, assigned to that post.

November 8, 1882, a party of Piegans ran off about thirty ponies belonging to Crow Indians, scouts at Fort Custer. The Crow scouts started in pursuit, overtook the thieves at Tullocks Fork, had a fight with them, and recaptured the stock. A detachment of cavalry, under command of Lieut. Alfred M. Fuller, Second Cavalry, was also sent in pursuit and returned to the post November 9. Another raid was made by the Piegans during the night of November 9, in which they ran off ten ponies.

November 9, 1882, Company G (Benson's) and Company I (Rawn's), Seventh Infantry, left Fort Stevenson *en route* to their new stations in the Department of the Platte, the former to Fort Fred. Steele and the latter to Fort Laramie.

November 10, 1882, Company D (Comba's), Seventh Infantry, left Cantonment Bad Lands *en route* to its new station, Fort Laramie, in the Department of the Platte.

November 10, 1882, Company F (Williams's), Seventh Infantry, left Fort A. Lincoln *en route* to its new station, Fort Laramie, in the Department of the Platte.

November 12, 1882, Company K (Sanno's), Seventh Infantry, left Fort Snelling *en route* to its new station, Fort Laramie, Department of the Platte.

November 14, 1882, Company K (Hartz's), Fifteenth Infantry, arrived from the Department of the Missouri, and took station at Fort A. Lincoln.

November 16, 1882, a battalion, consisting of Companies B (Shorkley's) and I (McKibbon's), Fifteenth Infantry, commanded by Maj. G.

M. Brayton, Fifteenth Infantry, arrived from the Department of the Missouri and took station at Fort Pembina.

November 16, 1882, Company A (Coolidge's) and Company E (Clifford's), Seventh Infantry, left Fort Pembina *en route* to their new stations in the Department of the Platte, the former to Fort D. A. Russell and the latter to Fort Bridger.

November 17, 1882, the headquarters, band, and Companies B (Bentzoni's) and I (Lawson's), Twenty-fifth Infantry, left Fort Randall *en route* to their new station, Fort Snelling, arriving November 20.

November 19, 1882, Companies F (Quimby's), and G (Kendall's), Twenty-fifth Infantry, left Fort Randall for their new stations, the former to Fort Snelling and the latter to Fort Hale.

November 19, 1882, Company B (Kirtland's), Seventh Infantry, left Fort A. Lincoln *en route* to its new station, Fort Fred. Steele, in the Department of the Platte.

November 19, 1882, Company A Seventeenth Infantry, left Fort Yates to take station at Fort A. Lincoln, arriving there November 20.

November 19, 1882, the headquarters, band, and Companies C (Conrad's), and D (Stafford's), Fifteenth Infantry, arrived at Fort Randall, from the Department of the Missouri.

November 21, 1882, the headquarters, band and Companies C (Benham's), and H (Freeman's), Seventh Infantry, left Fort Snelling *en route* to their new stations, Fort Laramie and Fort D. A. Russell, in the Department of the Platte.

November 22, 1882, Company B, Seventeenth Infantry, left Fort A. Lincoln to take station at Fort Yates, arriving there November 23.

November 23, 1883, Company C (Robe's), Twenty-fifth Infantry, arrived at Fort Snelling from Fort Randall.

December 2, 1882, First Sergeant Neeland, Company B, with Sergeant Bobst, Company F, Eleventh Infantry, and a detachment of Indian scouts, from Camp Poplar River, struck a camp of foreign half-breeds and Crees near Campbell's houses on Milk River. The half-breeds and Indians fled with their ponies, leaving in Sergeant Neeland's hands 58 carts and harness, 20 hides, and 16,000 pounds of meat.

December 3, 1882, Company G (Steelhammer's), Fifteenth Infantry, arrived from the Department of the Missouri and took station at Fort A. Lincoln.

December 3, 1882, Companies E (Humphrey's) and F (Whittemore's), Fifteenth Infantry, arrived at Fort A. Lincoln from the Department of the Missouri *en route* to their new station, Fort Stevenson.

December 4, 1882, Companies A (Brinkerhoff's) and H (Bean's), Fifteenth Infantry, arrived at Fort Randall from the Department of the Missouri.

December 21, 1882, Capt. O. B. Read, Eleventh Infantry, with two non-commisioned officers and one Indian scout, left Camp Poplar River for Fort Peck Indian Reservation to assist the Indian agent in removing intruders, it having been reported that white hunters, as well as half-breeds and Cree Indians, were hunting in large numbers on the Indian reservation. Seventeen white intruders were found and ordered to leave. No half-breeds or Indians were seen. The party returned to its post, December 31, 1882. Distance marched about 280 miles.

January 10, 1883, Capt. O. B. Read, Eleventh Infantry, with a detachment of twenty-three picked men from his command and four Indian scouts, left Camp Poplar River to remove intruders from Fort Peck Indian Reservation. January 14, about 2 miles from Willow

Creek, the detachment met two men with a wagon loaded with sixty-one hides, who claimed to have been hired by hunters to haul in their load; the hides were destroyed, their arms and ammunition were seized, and the men were ordered to leave the reservation. A cache of twenty-three hides was found the same day and destroyed. January 18, four white hunters were arrested, their property seized and destroyed. They were examined by a United States commissioner and committed for trial. No half-breeds or Canadian Indians were seen, except two Uncpapas met by Sergeant Herbert near the line, who were disarmed and allowed to go. The detachment returned to its post January 24. Distance marched about 300 miles. Very severe weather was experienced by the party; the mean temperature for the fourteen days being —12.25 degrees, and the lowest during the time —55 degrees.

January 23, 1883, Second Lieut. C. B. Hardin, Eighteenth Infantry, with a detachment of forty enlisted men from Companies B, C, E, and K, Eighteenth Infantry, six Indian scouts, a guide, and an interpreter, left Fort Assinniboine to hunt and scout in the vicinity of Milk River. January 30th, the command was joined by a detachment of fourteen men from Troop L, Second Cavalry. February 3, forty-four lodges of Canadian Indians (Crees) under Chief Rosebud were found on Woody Island Creek, near Falls Timber, and were sent across the line. The command returned to its post February 9. Acting Assistant Surgeon James M. Craighill accompanied the command as medical officer. Very few buffaloes were seen. The weather was very severe during the whole time the party was out.

February 5, 1883, Troop L, Second Cavalry, with one scout, Captain Norwood commanding, left Fort Assinniboine for the camp of Gros Ventre Indians, at Chimney Point, on Milk River, about 18 miles from the post, under Chief The-man-who-sits-high, to recover some horses stolen from Little Dog's camp of Piegans, and to arrest the thief (Cowskin). On arrival it was learned that the horses had been taken to Belknap Agency by Indian police; the Indian agent sent them to Chimney Point, and from there they were taken to Fort Assinniboine. The thief could not be found. The detachment returned to the post same day. Distance marched 36 miles.

March 1, 1883, Scout Culbertson, from Camp Poplar River, captured and disarmed nine lodges of Cree Indians, near Timber Creek. The chief of this camp reports they are part of the thirty lodges of Crees ordered away from Big Bend of Milk River about two weeks before by a detachment from Fort Assinniboine. Two bodies of white men, frozen to death, were found 25 miles from Timber Creek. The arms and ponies were returned to the Indians, and they were ordered to cross the line.

March 19, 1883, a large war party of Crees reported fighting herders and Piegan Indians at Kipp's Ranch, on Marias River. Troops H and L, Second Cavalry, and Company B, Eighteenth Infantry, Capt. R. Norwood, Second Cavalry, commanding, left Fort Assinniboine March 23 to intercept them, but not finding them returned to the post March 25. Distance marched 44 miles.

March 27, 1883, the military telegraph office at Benson's Landing Mont., was transferred to Livingston, Mont., 3 miles west.

April 12, 1883, a mounted detachment, Lieutenant Bell, Third Infantry, commanding, left Fort Shaw for a scout along the Marias River to expel any Canadian Indians that might be found. None were found and the detachment returned April 23.

April 14, 1883, Second Lieut. Alvarado M. Fuller, Second Cavalry,

with a detachment from Troop H, Second Cavalry, left Fort Assinniboine to intercept Cree Indians with stolen stock. He marched to Milk River, but being unable to cross on account of high water he returned to his post. Distance marched about 18 miles.

April 14, 1883, Capt. M. E. O'Brien, with a detachment of his troop (H, Second Cavalry) from Fort Assinniboine, captured fourteen lodges (about sixty-nine souls) Canadian Crees on Beaver Creek, and took them to that post, from whence they were taken on April 23 by Company F, Eighteenth Infantry, Captain Lloyd commanding, to the boundary line and sent across.

April 18, 1883, a pursuing party of Gros Ventres, under Chief Lone Horse, overtook and recovered from Crees near the Cyprus Mountains thirty-seven of the horses stolen by them from the Gros Ventres at People's Creek on the night of April 1.

April 18, 1883, Indian Agent Armstrong, of the Crow Agency, having reported that Piegan and Flathead Indians were depredating on Crow Indians on the night of April 14, a detachment from Troop D, Second Cavalry, Lieutenant French, Third Infantry, commanding, was sent from Fort Ellis to scout the vicinity of the Boulder and Sweet Grass Creeks, on the Yellowstone River, and remove all such Indians. None were encountered. April 21, a camp was established on Big Boulder Creek. April 27, Lieutenant French was relieved by Lieutenant Irwin, Second Cavalry, and the former returned to Fort Ellis. The detachment returned to its post May 20.

April 18, 1883, Captain Norwood with a detachment from his Troop (L, Second Cavalry) and six scouts left Fort Assinniboine to intercept a band of Canadian Crees with horses stolen from settlers on the Teton River, April 17. April 19, three Crees were captured, disarmed, and sent across the boundary line. A war party of Crees, with a loose herd, was encountered the same day at the east end of Wild Horse Lake, near the line; the Crees fired on the scouts as soon as they got within rifle range, but the detachment coming up and attacking them they scattered and the herd stampeded; some Indians remained behind, firing from sheltered positions, to cover the escape of the herd. Two Indians (one a prominent leader and medicine man) and two horses were killed, and one horse was wounded; the remainder of the band escaped across the line. No loss on our side. Detachment returned to post April 20. Distance marched about 115 miles.

April 22, 1883, Companies F and K, Third Infantry, Lieutenant Stouch commanding, left Fort Shaw for Camp Stearns, at Whoop-up Crossing (Abbott's, and later Kipp's Ferry), on the Marias River. (Longitude 111° 45′ west.) June 28, Company F, Third Infantry, was withdrawn from the camp; arrived at its post June 30. Distance marched 65 miles.

April 22, 1883, Troops B and K, Second Cavalry, Captain MacAdams commanding, left Fort Maginnis for temporary duty at Fort Assinniboine, arriving at the latter place April 30.

April 26, 1883, a detachment of twenty mounted men from Company C, Eighteenth Infantry, and four scouts, Lieutenant Anderson commanding, left Fort Assinniboine to scout in the vicinity of Eagle Creek, Mont., for foreign Indians. April 29, ten lodges of Crees were found in Bear Paw Mountains; eighty-one prisoners were taken without resistance, together with twenty ponies, nine guns and one hundred rounds ball cartridges. The detachment returned to its post with the prisoners April 30, from whence they were taken on May 1 by Company K, Eighteenth Infantry, Captain Paul commanding, and put across the

frontier; Captain Paul and his company returned to their post May 3. Distance marched by Lieutenant Anderson's detachment 120 miles. Distance marched by Captain Paul's detachment 60 miles.

April 28, 1883, in accordance with instructions from the Secretary of War, dated March 17, 1883, the Sioux chief Sitting Bull and his followers (prisoners of war) were taken from Fort Randall to Standing Rock Agency on the steamer W. J. Behan, by Lieutenant Davis and a detachment of the Fifteenth Infantry as a guard, and turned over to the United States Indian agent at that place, together with sufficient rations to subsist the band for four weeks after their arrival. Acting Assistant Surgeon Faulkner accompanied as medical officer. Lieutenant Davis and the detachment returned to their post May 26.

April 29, 1883, a detachment from troops of the Seventh Cavalry, at Fort Meade, Lieut. H. L. Scott commanding, left that post for a camp of Crow Indians on Powder River to warn them to return to their reservation, on completion of which duty the detachment returned to its station, arriving May 26.

May 1, 1883, information was received at Fort Assiniboine from Fort Walsh, N. W. T., that the Canadian Government had ordered the removal of the Crees further east and north to the Qu'Appelle district and the North Saskatchewan, to prevent them raiding on the American settlements. (Date of removal unknown.)

May 3, 1883, a detachment from Troop B, Second Cavalry, and three scouts, Lieutenant Brett commanding, left Fort Assiniboine to scout in the Bear Paw Mountains for depredating Indians. At Box Elder Creek ranchmen reported that several horses had been stolen from them about a week before. No Indians were found, and the detachment returned to its post May 5. Distance marched about 182 miles.

May 3, 1883, a detachment from Troop K, Second Cavalry, and three scouts, Lieutenant Robinson commanding, left Fort Assiniboine and scouted the eastern slope of the Bear Paw Mountains, crossed the divide between the Bear Paw and Little Rocky Mountains to the wagon-road leading to Broadwater's Landing on the Missouri River, thence north to Fort Belknap Agency, and returned to their post May 6. No Indians were seen, Distance marched about 110 miles.

May 4, 1883, a summer camp (Camp Morris) of Troops H and L, Second Cavalry, and Companies D and E, Eighteenth Infantry, Capt. Jacob Kline, Eighteenth Infantry, commanding (from Fort Assiniboine), was established near the Sweet Grass Hills, in latitude 48° 51′ north, and longitude 111° 9′ west, on the west side of Cottonwood Creek, to protect the settlements along the international boundary line.

May 7, 1883, Troops B and K, Second Cavalry, Captain MacAdams commanding, left Fort Assiniboine for the Canadian line to intercept a party of Cree Indians with some of the horses stolen from settlers on the Marias River. The detachment scouted the vicinity of Wild Horse Lake and along the Milk River, but found no Indians, and returned to its post May 11. Distance marched about 210 miles.

May 8, 1883, Company B, Eighteenth Infantry, Captain Durham commanding, left Fort Assiniboine for temporary duty during the summer at Fort Maginnis, arriving there May 17.

May 10, 1883, a scouting party under command of Lieutenant Steele, Eighteenth Infantry, from Fort Maginnis, captured a small band of Cree Indians near the mouth of the Musselshell River and took them to Fort Maginnis, May 16. The Crees were disarmed and taken to Fort Assiniboine, and from there sent across the Canadian line.

May 10, 1883, Lieutenant Bell, with a mounted detachment from the

Third Infantry, left Camp Stearns, on Marias River, to scout the vicinity for lawless Indians. At Pen d'Oreille Coulée a hunting party of Piegans, under Chief Little Dog, was found and ordered back to their camp on the Marias No foreign Indians were seen, and the detachment returned to camp May 13.

May 20, 1883, information having been received from the commanding officer of Fort Walsh, N. W. T., that a raiding party of American Piegans had been stealing horses and killing beef-cattle near that post, orders were sent to the commanding officers of Camp Morris, at Sweet Grass Hills, and Camp Stearns, near Whoop-up Crossing, on the Marias River, to intercept and arrest the raiders on their return to this side of the boundary line, and to recover the horses. Scout Valentine, returning from Camp Morris, came upon a party of South Piegans 16 miles from the camp, who had been on the war-path across the line. On June 15, Corporal Hale, with five enlisted men of Troop L, Second Cavalry, and two Indian scouts, from Camp Morris, came upon a party of raiding Piegans, from whom he recaptured eleven of the horses stolen from the Northwest mounted police, and took them to Camp Morris. The Indians escaped towards the Blackfeet Agency. On June 16, Sergeant Roecher, Troop L, Second Cavalry, in charge of a detachment from Camp Morris, scouting along the Milk River, came upon twenty-two lodges of Piegans, moving towards the river, and examined their stock, but found nothing but Indian ponies.

May 20, 1883, Troop I, Second Cavalry, Captain Hamilton commanding, from Fort Custer, established a summer camp (Camp Coale) on the north side of the Yellowstone River, near the mouth of Medicine Bow Creek, to protect Crow Indians.

May 21, 1883, a detachment of the Third Infantry, Lieutenant Bell commanding, left Camp Stearns, on the Marias River, to scout along Muddy Creek for Cree Indians reported to have been seen there. None were found, however, and the detachment returned to the camp May 23. Distance marched about 100 miles.

May 27, 1883, a detachment from Company H, Eighteenth Infantry, Lieutenant Adams commanding, left Fort Assinniboine with forty-seven Indian prisoners (Crees), conducted them to and put them across the Canadian boundary line. The detachment returned to its post May 29. Distance marched 80 miles.

June 22, 1883, Company F, Fifteenth Infantry, Lieutenant May commanding, left Fort Stevenson on the steamer Eclipse, for its new station, Fort Buford.

June 27, 1883, information having been received at Fort Assinniboine that a large war party of Crees had left the Northwest Territory to steal horses in Montana, Troops B and K, Second Cavalry, Lieutenant Robinson commanding, were sent to intercept them. June 28, Lieutenant-Colonel Ilges, Eighteenth Infantry, with Captain Potter, Eighteenth Infantry, commanding the mounted detachment of Company C, Eighteenth Infantry, one interpreter, and four Indian scouts and Assistant Surgeon Benham, left the post to join the battalion. The hunting party of Crees (about thirty-five) was seen near Cherry Butte. No war party was found. July 3, Lieutenant-Colonel Ilges turned over the command of the column to Captain Potter and returned to Fort Assinniboine. Captain Potter and his command returned to their post July 19. Distance marched 263 miles.

June 30, 1883, the following military telegraph offices in this department were discontinued on this date: Lincoln, Le Beau, Plum Creek, Rapid City, Smithville, Stevenson, and Tobacco Garden, in Dakota;

Billings, Bozeman, Crow's Nest, Deer Lodge, Ellis, Froze-to-death, Livingston, Missoula, New Chicago, Radersburgh, Keogh, and Superior City, in Montana.

July 2, 1883, Troop L, Second Cavalry, Captain Norwood commanding, was relieved from duty at Camp Morris, and returned to Fort Assinniboine, arriving there July 4. Distance marched 70 miles.

July 14, 1883, Company E, Eighteenth Infantry, Captain Kline commanding, was relieved from duty at Camp Morris and returned to Fort Assinniboine, arriving there July 4. Distance marched 70 miles.

July 22, 1883, Company E, Fifteenth Infantry, Lieutenant Chapin commanding, left Fort Stevenson on the steamer Black Hills for its new station, Fort Buford, arriving there July 24. (Lieutenant Maney and ten men remained behind to finish the business of the post and turn over the buildings to Indian Agent Kauffman, of the Fort Berthold Agency.)

July 26, 1883, Troops C and M, Second Cavalry, Captain Fowler commanding, left Fort Custer for their new station, Fort Assinniboine, arriving there August 11. Distance marched about 324 miles.

August 4, 1883, Troop B, Second Cavalry, Lieutenant Brett commanding, left Fort Assinniboine for Camp Morris to relieve Troop H, Second Cavalry.

August 5, 1883, Lieutenant George Bell, Third Infantry, with a detachment from Company K, Third Infantry, left Camp Stearns (on Marias River) and scouted the country north and west of the camp, and returned August 11, reporting everything quiet. Distance marched 203 miles.

August 5, 1883, upon complaint of settlers in vicinity of Maitland post-office, Douglas County, Dak., that Indians from the Yankton Agency were trespassing on their lands, Lieutenant Pague, Fifteenth Infantry, and a small detachment of the same regiment were sent from Fort Randall to Maitland post-office to inquire into the trouble, but finding that there was no cause for alarm Lieutenant Pague and the detachment returned to their post August 9. Distance traveled 90 miles.

August 6, 1883, Troop H, Second Cavalry, Lieut. F. U. Robinson, Second Cavalry, commanding, was relieved from duty at Camp Morris (near Sweet Grass Hills) and returned to Fort Assinniboine, arriving there August 8. Distance marched 70 miles.

August 8, 1883, at the request of Mr. Peter Ronan, United States Indian agent, Flathead Agency (the sheriff of Missoula County assisting), for help to arrest a number of drunken insubordinate Indians who were near the borders of the Indian reservation committing depredations on railroad employés and others, Major Jordan, Third Infantry, with a force of five officers and sixty-six enlisted men of the Third Infantry, left Fort Missoula for the agency. The white men who sold the liquor to the Indians were arrested by the sheriff and sent to Missoula City. The Indians (vagabond Nez Percés, Spokanes, and Umatillas) were required to leave the reservation at once. One Indian was arrested by Major Jordan for robbery and taken to Fort Missoula. The command returned to post August 11.

August 9, 1883, information having been received at Camp Coale (near Medicine Bow Creek) that a raiding band of Piegans had stolen a herd of ponies from the Crows, a detachment from Troop I, Second Cavalry, Lieutenant Holton commanding, left camp and started in pursuit of the raiders, but were unable to overtake them. Returned to camp August 12.

August 12, 1883, Camp Stearns, on the Marias River, near Whoop-up

Crossing, was abandoned this date, Company K, Third Infantry, Lieutenant Bartlett commanding, returning to its station, Fort Shaw, August 13. Distance marched 65 miles.

August 13, 1883, a detachment of forty enlisted men of the Second Cavalry, Lieutenant Doane commanding, left Fort Maginnis for the vicinity of Ford's Creek to investigate the reported killing of cattle by Blackfeet Indians. Assistant Surgeon Wyeth accompanied. No trace of Indians found. The detachment returned to its post August 14. Distance marched about 60 miles.

August 14, 1883, Troops H and L, Second Cavalry, Captain Norwood commanding, were relieved from duty at Fort Assiniboine, and proceeded to their new station, Fort Custer, arriving there August 30. Distance marched about 313 miles.

August 17, 1883, Troop K, Second Cavalry, Captain MacAdams commanding, left Fort Assiniboine for the purpose of arresting northern Indian horse thieves and recovering stolen stock. Captain MacAdams recovered twenty horses and arrested one of the thieves; the others with balance of stolen stock having crossed the line. The detachment returned to its post August 19. Distance marched 60 miles. On August 24, the thief ("Dragon Fly") and captured horses were taken charge of by a mounted detachment from Company C, Eighteenth Infantry, and conducted across the boundary line, where the prisoner was released and the stolen stock turned over to a detatchment of the Northwest mounted police.

August 24, 1883, Camp Morris (near Sweet Grass Hills) was abandoned this date. The battalion stationed there, consisting of Troop B, Second Cavalry, and Company D, Eighteenth Infantry, Captain Bomford, Eighteenth Infantry, commanding, returned to Fort Assiniboine August 26. Distance marched about 65 miles.

August 31, 1883, Fort Stevenson finally abandoned this date, the following buildings having been turned over to Indian Agent Kauffman, of the Fort Berthold Agency, on August 7: Five sets officers' quarters and out-houses; two sets company barracks and out-houses; four storerooms; one hospital building; one building (office and library); one bakery, with oven complete; one meat-house with refrigerator; one root-house; one guard-house; one corral and buildings (consisting of one blacksmith shop, one carpenter shop, one stable, one grain-house, one coal-shed, and one cattle corral with sheds).

September 10, 1883, Lieut. Col. George Gibson, Third Infantry, and Company F, Third Infantry, were relieved from duty at Fort Shaw, and proceeded to their new station, Fort Missoula, arriving there September 13.

September 14, 1883, Company H, Third Infantry, was relieved from duty at Fort Missoula, and proceeded to its new station, Fort Shaw, arriving there September 17.

As appears from the foregoing summary of events the year has been a quiet one. No hostile movements by Indians have disturbed the peace of the department. The cattle and horse stealing raids which have occurred in Montana were crimes rather than hostile operations.

This comparative quiet has permitted very much more attention to be paid to the important subjects of drill and target practice than it was possible to pay to them during the years when the troops were actively engaged in the field, and in both of them decided improvement has been made. The drill of the troops as a whole is, it is true, not yet what it should be; but it will be urged forward until a reasonably high standard shall have been reached.

The improvement in target practice and the increased interest manifested in it, especially by the younger officers, are very gratifying. At the close of the target year of 1882 there were four hundred and twenty-seven marksmen in the department. All the reports from the companies for the target year of 1883 have not yet been received, but it is safe to say that there are now in the department over thirteen hundred officers and men entitled to wear the marksman's buttons, a number that is more than twenty-five per cent. of the present aggregate strength of the troops, and is nearly twenty-five per cent. of the number of officers and men who have served in the department at any time during the target year.

The supplies for the troops furnished by the Quartermaster's Department and those furnished by the Subsistence Department during the fiscal year ending June 30 1883, are reported to have been generally good in quality and ample in quantity; but complaint is made of some of the subsistence stores intended for sales to officers. I invite attention to the appended report of the acting assistant inspector-general of the department upon this point. The brand of hams furnished has been the subject of the most serious complaint. It seems to meet with general condemnation. Attention is also invited to the remarks of the inspector upon the salt meat now furnished to the troops. It appears to create much dissatisfaction; and I respectfully submit that pickled pork, in such quantities as it is now proposed that the troops shall eat it, is not fit food for the human stomach.

I have said that the supplies furnished by the Quartermaster's Department during the last fiscal year were ample. Such, however, will not be the case during the present fiscal year. The allotment of money to this department from the diminished appropriation for general supplies is necessarily so small that the troops and their animals could not be maintained upon it. It has been found necessary to obtain a part of the necessary fuel and forage by the labor of the men. It is estimated that, before the winter sets in firewood and hay to the value of $154,756.28 will have been obtained in this manner. The necessity of resorting to these measures is much to be regretted. Even when a full supply of fuel and forage is obtained by purchase the amount of labor imposed upon our troops is excessive as compared with the work done by the troops of other nations. This additional labor not only creates dissatisfaction and leads to desertion, but it affects injuriously their drill and discipline and seriously impairs their efficiency.

The appended report of the chief commissary of subsistence of the department discusses the question of the subtraction from the soldier's ration of a part of the flour, that which is given to him by the statute, and the devotion of a portion of the part subtracted to purposes entirely foreign to the soldier's subsistence. I believe the present system to be a serious evil, and I invite attention to his remarks. I also invite attention to, and I concur in, the remarks of the chief commissary upon the desirability of legislation authorizing the exchange of funds between officers of different staff departments serving at remote posts.

As will be seen from the report of the medical director of the department, the health of the troops has been highly satisfactory. I invite attention to his remarks upon the subject of fur clothing, and I concur in the opinions upon this subject which he expresses.

The chief paymaster of the department recommends that paragraph 243, Revised Army Regulations, be so modified as to require company commanders to send to the chief paymaster, or to the paymaster at the place where the soldier wishes to be paid, a notification of the approach

ing discharge of a soldier *two weeks* in advance of the time when the discharge will take place. I concur in this recommendation.

The appended report of the acting assistant inspector-general of the department contains several suggestions which I think important and valuable. He recommends that recruits be sent to the regiments at shorter intervals and, of course, in correspondingly smaller detachments than has generally been the case in the past. The reasons which he gives for this policy seem to me to be unanswerable, and I recommend its adoption so far as circumstances will permit its adoption. He also recommends that after a soldier has faithfully served one term of enlistment of five years, during which he has borne a good character, he be allowed to re-enlist for such term as he may desire, not less than two nor more than five years. To authorize this course legislation would be required, but the plan is, I think, an admirable one. Many good soldiers who now leave the service at the expiration of their first term of enlistment would, I think, remain in it—perhaps by successive short enlistments remain for many years—and thus the expenses of the recruiting service would be diminished and, on the whole, a better class of men would be secured.

I concur also in the inspector's recommendations of the change in the tactics and the changes in the construction of the rifle which he suggests, and I agree with him in his opinion that the present manual of target practice is already antiquated and should be superseded by another book embodying the results of the recent experience.

Herewith I forward the reports of the commanders of the posts in the department and of the officers serving at these headquarters, and I desire to express my obligation to them for the manner in which they have performed their respecti ve duties during the past year.

Very respectfully, your obedient servant,

ALFRED H. TERRY,
Brigadier-General, Commanding.

The ADJUTANT-GENERAL
Of the Military Division of the Missouri, Chicago, Ill.

List of accompanying reports, etc.

1. Report of assistant adjutant-general on post schools, Department of Dakota, in triplicate, manuscript.
2. Report of superintendent recruiting service, Department of Dakota, in triplicate, manuscript.
3. Report of acting inspector-general, Department of Dakota, in triplicate, manuscript.
4. Report of acting judge-advocate, Department of Dakota, in triplicate, manuscript.
5. Report of chief quartermaster, Department of Dakota, in triplicate, manuscript.
6. Report of chief commissary of subsistence, Department of Dakota, in triplicate, manuscript.
7. Report of medical director, Department of Dakota, in triplicate, manuscript.
8. Report of chief paymaster, Department of Dakota, in triplicate, manuscript.
9. Report of chief engineer officer, Department of Dakota, in triplicate, manuscript.
10. Report of chief ordnance officer, Department of Dakota, in triplicate, manuscript.
11. Report of commanding officer, District of Montana, in triplicate, manuscript.
12. Report of commanding officer Fort A. Lincoln, D. T., in triplicate, manuscript.
13. Report of commanding officer Fort Assinniboine, Mont., in triplicate, manuscript.
14. Report of commanding officer Fort Bennett, Dak., in triplicate, manuscript.

15. Report of commanding officer Fort Buford, Dak., in triplicate, manuscript.
16. Report of commanding officer Fort Custer, Mont., in triplicate, manuscript.
17. Report of commanding officer Fort Ellis, Mont., in triplicate, manuscript.
18. Report of commanding officer Fort Hale, Dak., in triplicate, manuscript.
19. Report of commanding officer Fort Keogh, Mont., in triplicate, manuscript.
20. Report of commanding officer Fort Maginnis, Mont., in triplicate, manuscript.
21. Report of commanding officer Fort Meade, Dak., in triplicate, manuscript.
22. Report of commanding officer Fort Missoula, Mont., in triplicate, manuscript.
23. Report of commanding officer Fort Pembina, Dak., in triplicate, manuscript.
24. Report of commanding officer Fort Randall, Dak., in triplicate, manuscript.
25. Report of commanding officer Fort Shaw, Mont., in triplicate, manuscript.
26. Report of commanding officer Fort Sisseton, Dak., in triplicate, manuscript.
27. Report of commanding officer Fort Snelling, Minn., in triplicate, manuscript.
28. Report of commanding officer Fort Sully, Dak., in triplicate, manuscript.
29. Report of commanding officer Fort Totten, Dak., in triplicate, manuscript.
30. Report of commanding officer Fort Yates, Dak., in triplicate, manuscript.
31. Report of commanding officer Camp Poplar River, Mont., in triplicate, manuscript.
32. Roster Department of Dakota, in quadruplicate, printed.

2½ B.—REPORT OF COL. THOMAS H. RUGER.

HEADQUARTERS DISTRICT OF MONTANA,
Helena, Mont, September 10, 1883.

SIR: I have the honor to submit report of operations in the district of Montana for the past year, as follows:

These operations have principally been to prevent intrusion by raiding parties of Canadian Indians from north of the boundary, and to keep our agency Indians under proper observation and restraint. At the date, September 6, 1882, of the preceding annual report, a force detached from Fort Assinniboine was encamped at the Big Bend of Milk River. This force was withdrawn to the post on October 4, 1882, no incident in reference to it calling for remark having meantime occurred. By direction of the department commander, a detachment under command of First Lieut. Wm. Gerlach, Third Infantry, left Fort Missoula, Mont., on October 14, 1882, for the place, a short distance east of the western limit of Montana, to which construction eastward of the Northern Pacific Railroad had been finished, to render assistance in quelling a riot, reported to be in progress with intent by those concerned to stop further construction of the railroad eastward. Upon arrival of the detachment it was found that order had been restored by the arrival of detachments from Fort Cœur d'Alene, Idaho, and Fort Vancouver, Wash. The detachment under Lieutenant Gerlach returned to its station October 20. Upon information by the United States Indian agent, Mr. W. L. Lincoln, of the Belknap Agency, that the Lower Milk River region was overrun by Canadian Indians and half-breeds and white buffalo hunters, a hunting party which, under command of Second Lieut. C. B. Harding, Eighteenth Infantry, had left Fort Assinniboine for the Little Rocky Mountains on January 23, 1883, was, on the 30th of that month, reinforced, and the command, from companies of the Eighteenth Infantry and Troop L, Second Cavalry, of fifty-four men, six Indian scouts, accompanied by Act. Asst. Surg. James M. Craighill, was directed to scout the country to the east between the Milk River and the Missouri, and to the north of the Milk River, expel from the Indian reservation all white hunters found, and drive Canadian Indians and half-breeds north of the boundary. No white hunters were found, but a camp, forty-four lodges of Canadian Indians, Crees, was found February

3, on Woody Island Creek, a few miles from its junction with Milk River and sent north of the boundary. Very severe weather prevailed at the time. The command returned to Fort Assinniboine on February, 9.

On February 5, 1883, Troop L, Second Cavalry, Capt. Randolph Norwood commanding, left Fort Assinniboine for the Gros Ventre Indian camp near the Belknap Agency, to recover horses stolen from the camp of "Little Dog," a Piegan of the Blackfeet Agency. The stolen horses were delivered by the Indian agent at Belknap who had taken possession of them. The command returned to the post that day. Distance marched 36 miles.

On March 23, 1883, upon information that a large party of Crees had made a horse-stealing raid along the Marias River, Troops H and L, Second Cavalry, and Company B, Eighteenth Infantry, Capt. Randolph Norwood, Second Cavalry, commanding, left Fort Assinniboine to intercept the raiders. On this raid horses were stolen from the Piegans in the vicinity of their agency, March 15, and from settlers about Dlupuyer Creek, and on March 19, from the ranch of Joseph Kipp, a half-breed, on the Marias River, about 75 miles from Fort Benton, and several cattle were killed in that vicinity by these Crees.

Information was received too late for possible interception of the raiders. The troops returned to the post March 25. Distance marched 44 miles. Pursuit by two white herders and a party of agency Piegans camped near Kipp's ranch was made and a part of the horses stolen recovered and two of the Crees killed.

On April 12, 1883, a detachment of infantry, mounted, left Fort Shaw, Mont., Second Lieut. George Bell, Third Infantry, commanding, to scout along the Marias River and expel any Canadian Indians found. None were found and the detachment returned to Fort Shaw on April 23.

April 14, a detachment from Troop H, Second Cavalry, Second Lieut. Alvardo Fuller, Second Cavalry, commanding, left Fort Assinniboine for the boundary line to intercept a small party of Crees reported to have stolen stock from half-breeds on Milk River near the post, but was unable to cross the river owing to high water and returned to the post.

On the same day, April 14, Capt. M. E. O'Brien, with a detachment of his troop H, Second Cavalry, from Fort Assinniboine, captured fourteen lodges (sixty-nine persons) of Crees on Beaver Creek, and took them to the post. These Crees apparently had no connection with the raiders before mentioned, and were, on April 23, conducted to the boundary by Company F, Eighteenth Infantry, Capt. Thomas J. Lloyd commanding, and put across. Distance marched about 76 miles.

On April 18, a detachment from Troop D, Second Cavalry, Second Lieut. W. E. P. French commanding, left Fort Ellis, in compliance with orders from department headquarters, to scout the vicinity of Boulder and Sweet Grass Creeks, in the valley of the Yellowstone River, and remove Flathead and Piegan Indians reported by United States Indian Agent Armstrong, of the Crow Agency, to have stolen horses from the Crow Indians. No Flathead or Piegans were found, and a camp was established on the Boulder Creek. Lieutenant French was relieved from command by Second Lieut. Francis G. Irvin, Second Cavalry, on April 27, and the detachment returned to the post May 20.

On April 18, Capt. Randolph Norwood, Second Cavalry, with a detachment from his troop, L, Second Cavalry, and six Indian scouts, in charge of Sergeant Soper, Troop L, Second Cavalry, left Fort Assinniboine to intercept a party of Crees who the day before had stolen horses from a settler on the Teton River. Three Crees were captured near the boundary on the 19th, disarmed and sent across.

On the same day, near White Horse Lake, to the east of the Sweet Grass Hills and near the line, the scouts came upon a party of Crees, having in possession a band of stolen horses; the Crees fired upon the scouts and took shelter offered by the rough ground of the place. The fire was returned by the scouts and two of the Crees killed. The detachment near was quickly brought up by Captain Norwood, and an attack began, whereupon the Crees scattered and escaped across the line. The band of stolen horses had meantime stampeded towards the Marias. The detachment returned to the post on the 20th. Distance marched about 115 miles.

For better observation of the Marias River region a camp (Camp Stearns) was established near the Whoop-up Crossing of the Marias by detachment from Fort Shaw, on April 23, of Companies F and K, Third Infantry, First Lieut. G. W. H. Stouch commanding, to which force the mounted detachment from Fort Shaw was added upon its return to the post as before mentioned.

On April 30, 1883, Troops K and B, Second Cavalry, Capts. J. G. MacAdams and W. C. Rawolle, arrived at Fort Assinniboine from Fort Maginnis, for temporary duty.

A detachment of twenty men, mounted, from Company C, Eighteenth Infantry, First Lieut. John Anderson commanding, left Fort Assinniboine April 26, to scout the Bear Paw Mountains, and to the south of them about Eagle Creek, and on April 29 captured in the Bear Paw Mountains, without resistance, ten lodges of Crees (eighty-one persons) with twenty ponies and nine guns, and returned with the prisoners to the post April 30. Distance marched 120 miles. These prisoners were sent across the boundary in charge of a detachment from Company K, Eighteenth Infantry, Capt. C. R. Paul commanding, the detachment leaving the post May 1, and returning May 3. Distance marched 60 miles.

On May 3, 1883, a detachment from Troop B, Second Cavalry, Second Lieut. L. M. Brett commanding, left Fort Assinniboine to scout the Bear Paw Mountains, the immediate occasion being a report from persons at the stage station on the Box Elder Creek that several horses had a few days before been stolen, as supposed, by Indians. No Indians were found, and the detachment returned to the post May 5, having marched about 182 miles. Also on May 3 a detachment from Troop K, Second Cavalry, First Lieut. F. U. Robinson, Second Cavalry, commanding, was sent from Fort Assinniboine to search the country to the east of the Bear Paw Mountains to the Little Rocky Mountains for foreign Indians. None were found, and the detachment returned to the post on May 6, having marched about 110 miles.

On May 4 a summer camp (Camp Morris), consisting of Troops H and L, Second Cavalry, and Companies D and E, Eighteenth Infantry, from Fort Assinniboine, was established in the Sweet Grass Hills, on the west fork of Cottonwood Creek, and about 8 miles from the boundary line and 70 from the post, with orders to the commanding officer to keep the country to the east and west well scouted, and capture, if possible, all intruding Canadian Indians found.

On the 5th of May horses were stolen by Cree Indians from near the mouth of Cottonwood Creek, on the Marias River. Upon receipt of information at Fort Assinniboine, on May 7, Troops B and K, Second Cavalry, Capt. J. G. MacAdams commanding, left the post to intercept the raiders, and orders to like effect were sent to the commanding officer of the camp at Sweet Grass Hills. The command of Captain MacAdams scouted along Milk River to near the Sweet Grass Hills and the

boundary. These Indians, who had sufficient start, therefore escaped across the line. The command returned to the post May 11.

On May 10 a detachment from Fort Maginnis, Second Lieut. C. L. Steele commanding, captured a small band of Crees near the mouth of the Musselshell and took them to the post. They were disarmed and, with other parties of Canadian Indians which had been roving about south of the Missouri, were sent to Fort Assinniboine and put across the boundary.

On May 10 a mounted detachment, Second Lieut. George Bell, Third Infantry, commanding, left Camp Stearns, on the Marias River, to scout the region about. No foreign Indians were found, but the camp of agency Piegans, of chief Little Dog, was ordered from south of the Marias to the reservation on the north of the river.

On June 15 Corporal Hale, Troop L, Second Cavalry, with scouting party of five other men of the troop, recovered from a party of South (Aymas) Piegans, about 15 miles from Camp Morris, eleven horses that had been stolen from the Northwest (Canadian) police. The horses were sent to Fort Assinniboine and returned to the Canadian authorities. Upon report that Cree Indians had been seen south of the Marias River, on Muddy Creek, Lieutenant Bell with a mounted detachment left Camp Stearns on May 21 and scouted the vicinity, but no Indians were found, and the report was proven false. The detachment returned to camp May 23. Distance marched about 100 miles.

On May 27 a detachment from Company H, Eighteenth Infantry, First Lieut. H. H. Adams commanding, left Fort Assinniboine and put 47 Canadian Indians (those collected at Maginnis, as before stated) th of the boundary, and returned to the post May 29. Distance marched 80 miles.

In consequence of information received at Fort Assinniboine that a large camp of Crees had left the vicinity of the Northwest (Canadian) police station, on Maple Creek, and crossed the Cypress Mountains to hunt to the south, and that a war party had left the camp on a stealing expedition south of the boundary, notice was sent the commanding officer at Camp Morris, and Troops B and K, Second Cavalry, First Lieut. F. U. Robinson commanding, left Fort Assinniboine on June 27, 1883, going to the northeast of Fort Belknap Agency and near the boundary, to prevent the camp from coming south of the line and intercept any parties attempting a raid upon the camps of agency Indians then east of Belknap.

On June 28 Lieutenant-Colonel Ilges, Eighteenth Infantry, with Capt. C. H. Potter in command of a mounted detachment from his company (C), Eighteenth Infantry, left the post to join the command of Lieut. F. U. Robinson. A hunting party only of Crees was seen, which fled across the line. Colonel Ilges turned over command of the column on July 3 to Captain Potter, Eighteenth Infantry, and returned to the post. The command under Captain Potter continued on scouting the whole country between the boundary and Milk River to the east as far as Frenchman's Creek, but found no other foreign Indians, and returned to the post July 19. Distance marched 263 miles.

On August 8, 1883, the commanding officer of Fort Missoula, Maj. William H. Jordan, Third Infantry, went from that post with Companies B, D, and I, Third Infantry, by train on the Northern Pacific Railroad to Evaro Station, distant about 18 miles to the west, under circumstances as follows:

A dispatch was received that day by Major Jordan from the telegraph operator at Evaro Station that a party of whites had been corraled near

there by Indians, and that firing had begun, and also another dispatch from the station agent, Mr. Lish, that drunken Indians had stopped people on the road and demanded money; that more Indians were coming and trouble was expected. The troops arrived on the ground in a little more than three hours after receipt of the telegrams at Fort Missoula. The facts were found by Major Jordan to be, that a party of vagabond Indians, Nez Percés, Umatillas, and Spokans from the west, had been at Evaro Station and in the vicinity, most of whom were drunk and disorderly; that six of them had robbed a citizen, Mr. T. C. Lish, of $210 that morning, and compelled him to exchange ponies with one of their number; that one of the Indians, who committed the robbery, was wounded by a pistol shot by the father of Mr. T. C. Lish, whilst, aided by another citizen, attempting to recover part of the stolen money in possession of this Indian; that some of these Indians had attempted to take a gun from an employé of the railroad at the station, and, with some young Flatheads, who had joined them, had driven the haying party of the Flathead Agency from their hay-field at Comas Prairie. Soon after his arrival at the station, Major Jordan received an application from the agent for the Flatheads, Mr. Ronan, asking assistance to make arrests. A saloon keeper, who had sold the Indians liquor, was arrested by the sheriff, who accompanied Major Jordan, and sent to Missoula. On the 9th, Major Jordan, with part of his command, accompanied by Agent Ronan, went to Arlee Station, where some forty of the renegade Indians were found, to make arrests; but one of these was, however, identified as being concerned in violent acts. He was arrested and brought to the post. These forty Indians were held as prisoners, whilst a detachment under Lieutenant Avery, Third Infantry, accompanied by the agent, Mr. Ronan, went to a camp near, where three of the robbers were reported to be; but information of the arrival of the troops at the station had been received by these Indians, who had thereupon fled. The agent, upon his return, ordered the Indians who were held as prisoners to leave the reservation the following day. They were then permitted to have their arms and ponies and go. Upon information from Agent Ronan that all of the renegade Indians had left the reservation, and that the assistance of troops was no longer needed, Major Jordan returned to the post on the 11th.

On August 13, upon report made to the commanding officer of Fort Maginnis that a large camp of Blackfeet Indians was about 20 miles to the east of the post, upon Ford's Creek, killing cattle upon the range, Troop A, Second Cavalry, First Lieut. G. C. Doane commanding, left the post and scouted the country down the creek to the east for 30 miles, and to right and left, but found no Indians, and ascertained that the report was false.

On August 16 information was received by the commanding officer, Fort Assiniboine, from Indian Agent W. L. Lincoln, Fort Belknap, that five North Assiniboine (Canadian) Indians had arrived near the agency with fifty-three horses stolen by them from north of the line, and that he had secured twenty of the horses and thought some of the thieves might be secured. Capt. J. G. MacAdams, Second Cavalry, was sent with his troop to secure the intruding Indians and take possession of the horses. Captain MacAdams returned to the post August 19, with the twenty horses and one Indian prisoner. The other Indians, with the balance of the stolen horses, had gone back north of the boundary in the direction of Woody Mountains. Orders were thereupon given the commanding officer, Fort Assiniboine, to communicate the facts to the Dominion authorities at Fort Walsh, and to dispose of the Indian

prisoner in accordance with general instructions as to intruding Indians, and to surrender the horses to the owners.

There were, in addition to the movements by detachments above specified, quite a number made by detachments from the camps at the Sweet Grass Hills and on the Marias River, with effect of keeping the region from Fort Assinniboine west to the mountains and the Marias River country under observation.

No raid by Canadian Indians has, so far as known, been made this side of the boundary since that of May 5 last, to the Marias River. The knowledge by these Indians that efforts would in every case be made by the troops to capture them if found south of the boundary, and that their property would be destroyed or taken from them, has apparently had a very salutary effect in putting a stop to their inroads. Action taken by the Dominion authorities to restrain Canadian Indians, particularly the imprisonment of several identified as engaged in the raids made to the Marias River on the 19th of March and the 5th of May, and the removal, if permanent, further north from the boundary line of the greater part of the Cree Indians, who have been the most troublesome, will also have good effect.

For details of operations referred to herein, and particulars as to other matters mentioned, attention is respectfully requested to reports in detail that have as to such subjects been from time to time forwarded.

The camp at the Sweet Grass Hills was discontinued on August 27, 1883, and the camp on the Marias August 12, 1883.

Changes of stations made by companies are:

April 22, 1883, Troops B and K, Second Cavalry, left Fort Maginnis, Mont., for temporary duty at Fort Assinniboine. Arrived at Fort Assinniboine April 30, 1883. Distance marched 173 miles.

May 8, 1883, Company B, Eighteenth Infantry, left Fort Assinniboine for temporary duty at Fort Maginnis, Mont. Arrived at Fort Maginnis May 17. Distance marched, 173 miles.

July 20, 1883, Troops C and M, Second Cavalry, left Fort Custer, Mont., for Fort Assinniboine for station. Arrived at Fort Assinniboine August 11, 1883. Distance marched, 323 miles.

August 14, 1883, Troops H and L, Second Cavalry, left Fort Assinniboine for Fort Custer for station.

Very respectfully, your obedient servant,

THOS. H. RUGER,
Colonel Eighteenth Infantry, Commanding District of Montana.

The ADJUTANT-GENERAL,
Department of Dakota, Fort Snelling, Minn.

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3 B.—REPORT OF BRIGADIER-GENERAL O. O. HOWARD.

HEADQUARTERS DEPARTMENT OF THE PLATTE,
Omaha, Nebr., October 8, 1883.

ASSUMING COMMAND.

SIR: I have the honor to report that, accompanied by my personal staff, I reached Omaha the 5th of September, 1882, and assumed command the same day. Brig. Gen. George Crook, my predecessor, had been obliged to leave prior to my coming, to set out for his new

command, so that the Lieutenant-General held the department directly during the interim until my arrival.

The same day Maj. J. H. Taylor, assistant adjutant-general, assumed the duties of adjutant-general of the department.

The changes in the staff and in the clerical force caused me some little embarrassment at first in getting acquainted with the condition, wants, and methods of business of the department.

VIISTING POSTS.

Just as soon as it was practicable I made a personal visit to each post for the purpose of observing the country and inspecting the garrisons, completing this work in the spring of 1883.

THE LOCATION AND VALUE OF THE POSTS.

The portion of the department where Indian disturbances were likely to occur was west of the Missouri. For a short time the Sioux and Cheyennes, disturbed by negotiations for parts of their reservation and by internal difficulties, gave me some anxiety.

NIOBRARA AND ROBINSON ON THE FRONT.

Niobrara and Robinson were the nearest posts, each sufficiently strong to maintain it selftill re-enforced from Omaha and Laramie, Sidney and Russell; and though it is important for the sake of economy to concentrate troops, making large and permanent garrisons along the railways, still posts like Robinson and Laramie, the former for observation, for settling small troubles, and as a nucleus on which to form in case of a more general disturbance, are still too necessary to be dispensed with. Going a little further west we have the Crow Indians, the Shoshones, and Bannocks still roving over the northern part of Wyoming, where the cattle ranges are more extensive and the stock more abundant than elsewhere.

M'KINNEY THE FRONT OF WYOMING—HOW RE-ENFORCED.

A few collisions have here occurred between irresponsible white men and Indians during the year, but no serious outbreak. Fort McKinney, now the headquarters of the Fifth Cavalry, with its four troops and one company of infantry, is well located, having the same relation to the Indians along the northern border of Wyoming that Robinson and Niobrara have to the Sioux. Every case of disturbance has been promptly investigated, and thus far serious difficulty prevented. I rely on Laramie, Russell, and Steele to promptly re-enforce McKinney in case of need.

Those of the Shoshones and Bannocks who wander from Fort Hall as a center are still quite nomadic in their habits, and local troubles do occur sometimes between the Bannocks and Shoshones and sometimes between the Bannocks and the white men engaged in mining and trapping. White people living near Fort Hall have expressed much anxiety on account of the discontinuance of that fort the first day of May last; but Fort Douglas having been enlarged and soon to have an entire regiment, the Sixth Infantry, it is possible with the present railroad facilities to send into that vicinity an adequate force in a single day and to re-enforce it by the Oregon Short Line from Steele and Russell and Bridger in two days.

FORT BRIDGER, FORT THORNBURGH, THE UTES, ETC.

There is one other source of apprehended disturbance, judging by our past experience; that is, from the Utes and Uintahs in Eastern Utah. Owing to the individual sharpness and avarice of squatters and land-owners within the limits of the new Fort Thornburgh Reservation it became impossible to secure a valid title to the land, so that the War Department very wisely gave up the building of the post. But Fort Bridger is being enlarged, and the road thence to the Ashley Valley has been worked by companies of the Seventh and Ninth Infantry during the summer, under the energetic direction of Major De Russy, until a practicable wagon-road, about 100 miles in extent, and a fair telegraph line connect Fort Bridger with the threatened district. During the summer an encampment has been made under the command of Major Bush, of the Sixth Infantry, at Fort Thornburgh. This force has also aided materially in building and repairing the road and the telegraph line. The major is just at this time *en route* with his force to rejoin Colonel McCook at Fort Douglas. He leaves a sergeant and a telegraph operator at Thornburgh. These Indians are not liable to any outbreak during the winter. Should necessity demand it another encampment can be made next season. Troops from Fort Douglas can reach these Indians nearly as soon as those from Bridger.

FORT WASHAKIE.

A rumor has come to me that the Secretary of the Interior purposes to recommend the withdrawal of Fort Washakie because of the too close neighborhood of the soldiers and the Indians. By observing the nature of the country in the vicinity of Washakie it will be seen how impracticable it is, owing to intervening ranges of mountains, to get troops from McKinney to Washakie; as it is Washakie must look to the railroad, 150 miles distant, for any re-enforcement. Remove Washakie and there will be no force to watch the doings of the Shoshones and Arapahoes there, nor to investigate causes of complaint, settle difficulties, and protect the settlers who are fast spreading throughout that region. Simply from a military point of view I would rather enlarge Washakie and make it a three-company post—two of cavalry and one of infantry. Take away the fort and let the Indians depend, as now, for their subsistence partly on hunting; cattle will be killed by them; the cattle men will resent it, and the usual conflict and bloodshed will certainly ensue. Certainly there is no demoralization of the troops or of the Indians to be apprehended which may not be effectually prevented by care and discipline.

DISCIPLINE.

The discipline of the command is indicated by the reports of the inspector and the judge-advocate of the department. The aggregated present for duty at this date is 179 officers and 2,618 enlisted men. The inspections have been most carefully conducted and fully reported. Squad, company, and battalion drills have been required. The inspector sums up his conclusions:

> In some cases the men show the bad effects of excessive labor; generally the military appearance and drill of the troops are good. Again, the discipline of the several commands is very good; the officers are zealous and energetic in the discharge of their military duties and the men are as a general thing subordinate and obedient.

In these remarks I fully concur. The judge-advocate gives an aggregate of one hundred and sixty-nine general courts-martial, of which seventy-five are for desertions.

There have been no commissioned officers in the department against whom serious charges have been preferred; in fact no charges at all which, in my judgment, would warrant a trial by a court-martial. With regard to desertions, which is the most serious military offense with which we have to deal, please notice that I have made a special report. To emphasize my recommendations therein made I will here repeat them:

Ninety per cent. of the desertions take place in the first two years of the soldier's enlistment, and of this sixty-five per cent. in the first year.

The following from a communication to these headquarters from Capt. Emil Adam, Fifth Cavalry, I heartily indorse: "A young man has a somewhat romantic idea of the life of a soldier; he becomes enthusiastic, and enlists for five years, but when he finds he is subjected to a severe discipline, and to him a monotonous life, he becomes disheartened, and, finding that only a few deserters are caught, he commences to think of desertion, and the more he thinks of it the less he can resist it, seeing that he has at least three or four years of it yet; therefore he makes up his mind to desert at the first opportunity.

I propose the following manner of seeking improvement, suggested by Captain Adam: 1st, enlistment for three years, a sufficiently long engagement with our present means of communication with military stations; 2d, pay and allowances the same as now, retaining all but $10 per month until expiration of enlistment; 3d, re-enlistment for two or three years, which will secure nearly all good soldiers. Men dislike to engage for the present long period in the same place. Pay during re-enlistment should be the same as now during the fourth and fifth year; all subsequent re-enlistments should be for one or two years. These re-enlistments will be of no expense to the Government, and under them good men will spend their best years in the service, remaining on from year to year. The clothing allowance should be valued at least 50 per cent. higher and charged to the soldier at the increased rate. This will to a great extent prevent the men from selling their clothing at a low rate and give to clean and economical men a deserved premium. Short terms will get rid of the poor men sooner and good soldiers will prefer to enlist for short rather than long terms. In case of need of a sudden increase old soldiers of a good character will be ready to enter the service for one or two years, and we will not have to put up at such a time with raw recruits, a hindrance in the field.

The remedial measures embraced in the following summary I earnestly recommend:

1st. Shorter term of service.
2d. Cause the recruiting officers and others to take special pains to impress the new man enlisted with the binding force of the solemn oath he takes.
3d. Greater ease in procuring discharge upon repayment of expenses.
4th. Higher rewards for the apprehension of deserters.
5th. Punishment of imprisonment for at least the remainder of term of enlistment.
6th. Restoration for deserters who quickly repent and surrender.
7th. Make fraudulent enlistment punishable by court-martial.
8th. Indelibly mark convicted deserters.

BUILDINGS.

My first effort after taking command was to remedy as far as possible a disarrangement of companies, which had doubtless been occasioned by the many sudden calls here and there for small detachments and the making room at the different posts for the introduction of new troops. For example, I brought the Fourth Infantry to Fort Omaha and nearest posts; the Ninth Infantry to Fort D. A. Russell, with detachment at Bridger; the Sixth Infantry to Fort Douglas, enlarging Douglas to capacity for ten companies; the Seventh Infantry to Fort Laramie, with detachment at Steele. On the proposed introduction of the Fourteenth Infantry, McKinney became the headquarters of the Fifth Cavalry, a single company of the Ninth Infantry remaining there temporarily. The other troops of the Fifth, occupy as is proper, the remaining northern line of posts, namely, Washakie, Robinson, and Niobrara.

The Union Pacific Railroad being the base line whether the department faces north or south, it is plainly the most important for the permanent posts which I hope will before long be selected and built or rebuilt. Should any difficulties occur with the Indians, still numerous on the northern front and in Eastern Utah, or with the communistic rioters at railroad centers, or with the increasing bands of stock thieves and railway robbers, or with other people disposed to break or override the United States laws in any way too extensive for suppression by the civil authorities, these permanent garrisons, well-drilled, well-behaved, and well in hand will be just the requisite for the emergency—just the requisite to secure or maintain the peace. With this view I recommend that all temporary decaying wooden structures at Fort Omaha be replaced by good brick or stone buildings, and that the fort be enlarged to the capacity of one regiment of infantry and one battery of artillery.

Second. That Fort D. A. Russell be completely rebuilt with brick or stone, having buildings as good, for they should be as permanent as those for the United States courts and the United States post-office.

Third. That appropriations be liberally given to Fort Douglas until it shall become completely constructed with stone. Douglas and Russell each to contain at least an entire regiment. Fort McKinney at present needs but few repairs. It was quite a mistake to build the officers' quarters of wood, and so near together that in case of fire it would be difficult to save them. The burning of one house would involve the others.

Fourth. I renew my recommendation to make Fort Niobrara a six-company post, giving it also, from its location, a permanent character. It appears to me that it would be the best of economy to do in the War Department as is done in other departments—select permanent locations, plan for the best stone or brick structures, and appropriate carefully for them year by year until they shall be completed. Surely there is no reason why the officers and soldiers, there being so few of them, should not be as well housed and cared for as they are in any other country.

CHAPLAINCY.

With much reluctance, I call your attention to the subject of the chaplaincy in my department. Without making any reference to individual chaplains, with a few happy exceptions, the service in the Department of the Platte is not adequate. For Laramie, Robinson, Washakie, Sidney, Steele, and Bridger, at each of which the labors of a good clergyman are most essential, there is none; none for visiting the sick or burying the dead; none to meet the varied spiritual needs of Christian men, women, and children, here more than elsewhere cut off from ordinary religious and social privileges. At some of the other posts age and infirmity have crippled the efforts of chaplains willing and anxious to render proper service.

I think if post commanders of the unchaplained posts could employ acceptable clergymen, on recommendation of the post council of administration—employ them as contract physicians are employed, for a part of a year, when not possible for the entire year, then the needs might be met. During the summer vacations many Eastern clergymen of ability and experience could be induced to come and render service for a few months. If this seems to distribute the power too much for safety, the appointments might be lodged in the department commander, on recommendation of a post council, approved by the post commander. At any rate, for the sake of all concerned, it appears a plain duty to give serious consideration to the subject of the selection and appointment of chaplains for destitute frontier posts.

QUARTERMASTER AND COMMISSARY SUPPLIES.

The quartermaster and commissary supplies have been, using the language of the department inspector, "ample in quantity, and, almost without exception, of good quality."

The transportation, including horses, mules, and wagons, is good, and deemed sufficient for ordinary needs. However, paymasters, inspectors, staff or other officers sent to the different posts may be troubled by the recent reduction. I fear that for the garrisons off the line of the railway one spring wagon will prove wholly inadequate to meet these needs. The two quartermasters' depots are reported as in admirable order in every particular.

The troops have been regularly and promptly paid by the officers of the Pay Department in their bimonthly visits.

I have never found a medical department in better shape than ours. It is exceptionally complete in all its arrangements—good buildings, ample stores, and neat wards, attended with a thorough police within and without.

The report of the medical director shows the health of the command to have been remarkably good throughout the year.

Capt. Frank Heath, who has for some time been in charge of the ordnance depot at Cheyenne, has been made chief ordnance officer of the department in addition to his other functions. This depot has been very industrious this year in the way of receiving, repairing, overhauling, cleaning, and reissuing of ordnance and ordnance stores, and the work has been done at a very moderate expense by enlisted men.

The men have been worked hard at or near most of the forts, depots, and stations. I wish it were otherwise. Colonel Mason well remarks:

> The employment of enlisted men as laborers and mechanics seems to be a necessity growing out of the limited appropriations. It often seriously interferes with the performance of their legitimate military duties. After a soldier has worked with pick and shovel, trowel and ax, or with his hands in heavy manual labor for many hours each day and for many days, it cannot be expected that he will go willingly to drill, parade or guard.

Surely it is not wise to cut down those appropriations and throw almost the entire labor of road-making, ditching, fencing, and building upon the soldiers. It is really a breach of contract on the part of the Government to enlist a man for one purpose, distinctly set forth, and then force him to fulfill another. Our only excuse is we are compelled by necessity to do this.

TARGET PRACTICE.

Target practice has caused unusual interest and had most praiseworthy results. In happy contrast with a few years ago, we have regiments of marksmen. Capt. C. A. Coolidge has taken a department team to Leavenworth for the division competition, of which he has reasons to be proud.

The interest throughout the department is increasing; good ranges, well furnished with targets and other equipments, necessarily have had a good effect. The generous gifts of officers and others in the way of prizes have stimulated the competitors sent to headquarters. I have been exceedingly pleased with the efforts of all the officers and enlisted men who have met near Fort Omaha to compete, and especially commend their uniform soldierly conduct.

ENGINEER WORK.

Lieut. D. C. Kingman, Corps of Engineers, has had devolved upon him the repairing and making of roads, bridges, and other improvements in the National Park, in addition to what he has reported in his annual summary. The Secretary of the Interior will doubtless credit him with the accomplishment of this important work.

From the accompanying reports of the chiefs of bureaus, marked A, B, C, D, E, F, G, and H, more detailed accounts of all business transactions in the department may be found. To them I invite attention.

For courteous, cheerful, and effective assistance rendered me in the performance of my public duty I commend each member of my staff.

Very respectfully, your obedient servant,

O. O. HOWARD,
Brigadier-General, U. S. A., Commanding Department.

The ASSISTANT ADJUTANT-GENERAL,
Headquarters Military Division of the Missouri, Chicago, Ill.

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3 C.—REPORT OF MAJ. GEN. JOHN POPE.

HEADQUARTERS DEPARTMENT OF THE MISSOURI,
Fort Leavenworth, Kans., October 2, 1883.

COLONEL: For the information of the Lieutenant-General, commanding the division, I have the honor to submit the following brief report of military operations and conditions in this department for the past year:

INDIAN TERRITORY.

The condition of affairs in the Indian Territory remains much the same as at the date of my report of last year, except that the remainder of the Northern Cheyennes, about four hundred in number, have been sent back to the North. The departure of these Indians, who have never been on good terms or affiliated with the Southern Cheyennes, has greatly simplified matters on the Cheyenne Reservation, and I think no trouble on a large scale at all likely to occur with these Indians. No doubt small difficulties and quarrels, and perhaps occasional violence, will arise between the Indians and stock-men who overrun that region, but nothing of a very serious character is likely to result.

Payne and his parties of so-called colonists are persistent in their efforts to enter and occupy the Oklahoma district, but so far they have been readily and promptly ejected by the troops. The whole history of Payne's operations is a farce, in which the Government is, of course, at a disadvantage. There is no punishment for Payne and his followers, the law only providing a fine for such transactions—a sort of punishment easily borne by the impecunious crowd which follows this business of intrusion into the Indian Territory. It should seem that some adequate punishment for these offenders should be provided. As matters stand, the whole affair is simply a serious of processions to and from the Kansas line, for the general amusement of the people of this region. Of course, by keeping enough troops in the field we can drive all these parties out, but it is both an expensive and insufficient method of dealing with the question.

What I have said of the Cheyennes can be also said of the Kiowas and Comanches. They are entirely quiet, and nothing is likely to disturb it on a large scale. The same trouble with the stock-men from Texas must be expected as are common farther north in the Territory, but they are purely local or personal difficulties, not very difficult to settle.

THE CREEKS.

Within the past year we have been called on to assist in settling difficulties in this tribe of semi-civilized Indians, who have long been considered to be entirely freed from the necessity of any military intervention. A revolution broke out among them against their local government, in which both parties took arms, and the revolutionists were finally, after some inconsiderable bloodshed, driven out of the Creek country and took refuge among the Kiowas and Comanches. At the request of the Interior Department, Major Bates, Twentieth Infantry, with a considerable military force, was sent to bring them in as prisoners. They surrendered to him without trouble, and seven hundred of them were brought into Fort Gibson accordingly. Commissioners met them there and an agreement was reached which appears to be satisfactory to all parties. The Indian prisoners were all released and went back to their homes. A considerable military force of the United States is stationed at proper points in the Creek country to prevent for the time any breaches of the agreement, but they will probably not be kept there much longer.

In all this troublesome business in the Indian Territory, Major Bates, Twentieth Infantry, commanding in the Creek country, and Captain Carroll, Ninth Cavalry, in the Oklahoma district, have shown great judgment and discretion, and have executed their perplexing duties with satisfactory success.

KANSAS AND COLORADO.

There have been no Indian troubles of any kind in either of these States. The removal of the troops from White River has not been attended with any ill results whatever. There have never been many settlements along the White River, and I think that, except perhaps in the vicinity of the military cantonment and some parts of the valley above it, there never will be. The whole valley of the White River from the cantonment westward, and the district of country between the White and Grand Rivers, is about as uninviting a region as can be found anywhere, and although the White River Utes will no doubt straggle up the valley from their reservation in Utah for hunting, I do not suppose there will ever be many settlers to be interfered with or made afraid. The White River and Uncompahgre Utes have been perfectly peaceable and quiet, and there appears to be no reason whatever to anticipate any trouble with them.

NEW MEXICO.

I submit inclosed the report of Brig. Gen. R. S. Mackenzie, commanding the district of New Mexico. It will furnish all of the details of matters more generally referred to.

MILITARY POSTS.

The wisdom of consolidating the posts in this department into a few large posts becomes not only more apparent but more necessary every

day. The four posts in the Indian Territory, viz, Forts Sill, Reno, Supply, and Elliott, will probably be necessary with at least their present force for some years to come, both to be used from time to time to preserve quiet among the Indian tribes and settle difficulties which arise among them, which require for a short time a police force to prevent violence until the difficulties are adjusted, and also to protect the Territory against constant invasion by white adventurers, which are increasing in numbers and frequency every year, and which the wholly insufficient penalties of the law as it now stands make easy and to the intruders entirely harmless. Stringent laws, imposing severe penalties, can alone put a stop to this constant invasion of Indian lands and open defiance of the Government. It is hoped that Congress at this session will provide fully and finally for this trouble. The four posts above named will fully meet present necessities for some time at least, and should be maintained and kept in good repair. The liberal allowance for this purpose for the past two years has enabled us to do this satisfactorily.

I think it will be but a short time before we can safely abandon the cantonment on the Uncompahgre, which even now only serves to give confidence to the settlers in that region, who are more or less excited by imaginary apprehension of hostilities with the Utes who have been placed on a reservation in Utah far to the west of them. In abandoning posts, however, provision should be made for quartering the garrisons elsewhere at some of the large and, in a sense, permanent posts in the department.

Forts Wallace, Dodge, Larned, and Harker have been abandoned, as also the cantonment on White River and the station at Pagosa Springs. Fort Garland will be abandoned on or before December 1, as soon, indeed, as the necessary quarters for the company are provided at Fort Lewis.

Of the other posts in the district of New Mexico, four seem to me to be of the first importance, viz, Forts Lewis, Wingate, Bayard, and Stanton. The small post near El Paso has perhaps some consequence because of its relation to the Mexican frontier at an important point, but so far as regards the Indian question it has no importance whatever. Craig and Union are only valuable as shelter for troops, and the garrison of Cummings by next spring can, I think, be distributed to Stanton and Bayard. These four posts I believe to be all that will be needed in New Mexico, and are well placed for the service there; but before giving up any of those which no longer serve a military object, I must impress the necessity of providing for their garrisons at some large posts to be retained.

UTES, NAVAJOES, AND APACHES.

These are the three tribes of Indians which occupy New Mexico, the Navajoes being by far the most powerful of the three. The Utes in Southwest Colorado are simply a small band of the southern portion of the nation, whose chief is Ignacio. Fort Lewis is in contact with the northern line of their reservation. The Navajoes occupy the country south of them, there being a small strip of country along the San Juan River which separates the two reservations. White settlements and stock ranches have been located along the narrow strip, and of course intrusion in both directions, and by both whites and Indians, is common enough. This state of things occasions, of course, constant bickering and quarreling, which lead sometimes to small acts of violence, much aggravated and made more frequent by white whisky-

sellers, who, having their stores in this narrow strip along the San Juan, which is within the Territory of New Mexico, are not amenable to military authority and have small apprehension of the civil courts. Very few well-to-do and peaceful settlers care to risk their lives by informing on or giving testimony against the desperate and abandoned outlaws who commit crime and endanger continually peaceful relations with peaceably disposed people, both whites and Indians, by whisky-selling and quarreling. So long as the garrison of Fort Lewis remains there will be no serious trouble with the Utes.

The Navajoes, bordering at the north upon the Ute Reservation, occupy the country south as far as the Southern Apache country, and their reservation extends also far to the eastward of their agency at Fort Defiance. They are probably the most powerful tribe, as well as the wealthiest, now left on this continent. They are to a certain extent not exactly civilized, but much removed in that direction from both the Apaches and the Utes. It would be fatal to them and their possessions to go to war with the whites, and they realize that fact as well as the whites do, and I therefore fully believe that they will never go to war unless driven to it. The causes which may force them into hostilities, however, are sufficiently apparent, and are becoming plainer and harder to deal with every day. Although the reservation of the Navajoes, originally very large, has been extended largely, the increase in their sheep and other stock has been much larger proportionately, and every day the reservation is becoming less and less sufficient for their stock. They do not sell stock much, if at all, but simply the wool or other product. The Government cannot give these Indians more land because of the increase of their stock without practically taking it away from white settlers or thus putting it beyond their reach, and the whites need more land for the same reason the Indians need it. The white man, besides, pays for all the lands he can acquire; the Indian rather demands it as a bonus for good behavior.

The Navajo Reservation, as I have said, has been largely, and I think unwisely, increased. If these Indians want more land because of their great prosperity, surely they can afford to buy it as well as the whites can, and no one, especially in that region, can be made to see the justice or the wisdom of giving lands to Indians already in possession of vast districts which were given them without a price, and who demand it because of their prosperity, and at the same time of forcing the whites to buy land in the same region and for the same purposes. To give the Navajoes more land because of their success, and force the white settlers to buy what is left, is too much like giving to those who have, and taking away from those who have not what little they have. That the white settlers will make far better use of the land than the Indians is certain, and there cannot in the case of the Navajoes be found any reason whatever why they should not do in such a matter as their white neighbors are forced to do, viz, to keep their stock down by sales to the capacity of their land to subsist it. The money these Indians would acquire yearly by selling their surplus stock would go far toward buying them food sufficient for their wants, and there is no conceivable reason why they should not live (partly, at least) upon their income from this source, as the whites must do.

In short, I believe certainly that the just and reasonable policy of the Government should be to give no more lands to the Navajoes, but to require them, by sales, to reduce their stock annually to the numbers that their reservation will support, and to use the money thus obtained to aid in their own subsistence. All other unoccupied lands in New Mexico

should be thrown into market for sale, thus opening the country to settlement and development by white people, whose prosperity would benefit the Government financially, and at the same time be a powerful check upon Indian outbreaks. As matters stand, the great increase of stock owned by the Navajoes has forced them to overflow their reservation (no longer able to subsist it) and to intrude north, east, and south upon lands owned both by whites and other Indians. This practice along their northern line, which borders the San Juan Valley and the reservation of the Southern Utes, has already occasioned a great deal of bickering and quarreling, and occasionally murder or other acts of violence, on the part of all concerned. It is next to impossible to keep the Navajoes with their stock on their own reservation, and any intrusion elsewhere with their great herds destroys the grazing lands of all others, either Indians or whites, who are in contact with their reservation lines. The conditions are such now, and they are every day becoming more stringent, that the stock of the Navajoes must be decreased by sales or more land must be given. As the latter seems to me to be unjust, both to the Government and to the white immigrants, and as one grant of land simply necessitates another and another, in constantly increasing degree and decreasing intervals, it seems to me altogether wise to put a stop to it at once in the manner I have indicated.

The Mormons are extending their settlements in Colorado and New Mexico very fast, and there is already almost a continuous line of these settlements west of the Navajo Reservation, from the Utah line to the Mexican boundary. Their affiliations with the Navajoes and other Indians are very close and intimate, and they appear in all cases to make common cause with the Indians. I think there is no doubt that they not only furnish the Indians with all information concerning the purposes of the Government, but that they encourage them to acts of hostility and of resistance. If serious trouble with the Navajoes should ever arise, there is little doubt that the Mormons will be found to be largely instrumental in bringing it on. Their presence at so many places and in such numbers in that region is a constant menace to the peace of that frontier, which should be in some way counteracted.

I think the present agent of the Navajoes (Mr. Rierdon) a man of force and zeal, and that under his conduct of his agency we can confidently anticipate judicious and resolute action.

The Jicarilla Apaches, a band of Indians who have always lived with the Utes, and who are in no sense, except in name, *Apaches*, have lately been removed from Northern New Mexico, where they have been living for forty years, at least, with the Cimmaron band of Utes, to the Mescalero Reservation, near Fort Stanton. The concentration of more Indians so near the Mexican boundary line is greatly to be regretted, for reasons I have often presented to the Government, but in this case there is little to be feared, as I have no doubt that these Indians will be back among the Utes about as soon as the wagons which took them to Fort Stanton can return to Santa Fé. This band of Indians was sent to the Mescalero Agency once before, with this result, and I have little doubt that it will be repeated. The Mescaleroes have themselves been perfectly quiet and well behaved for a long time past, and seem to be very well managed by their most efficient agent, Mr. Llewellyn.

As will be seen from General Mackenzie's report, the Apaches have given little trouble in New Mexico for some time past, but that frontier is constantly in danger from the San Carlos Reservation, in Arizonia, and the Mexican Indian refugees and natives; but the military precautions and disposition of troops will, I think, assure safety, so far as this department is concerned.

MILITARY EXPLORATIONS.

During the past season explorations for military purposes have been made successfully, first, of the region of country lying north and northwest of Fort Wingate, by Lieutenant Parker, Fourth United States Cavalry, specially detailed for that purpose; and, second, of the entire region between the White and Grand Rivers, as far west as the Utah line. The reports and maps of these explorations are not yet ready, the latter party having only returned within a week past; and it will be sufficient to say that the whole region along the valleys of the White and Grand Rivers, and between these streams, is practically worthless either for farming or grazing purposes. At the junction of the Gunnison and Grand Rivers a considerable town has arisen, and large azequias have been taken out to irrigate a small section of the valley of the Grand River at that point, but below that immediate spot there is no land fit for settlement along the Grand, and none west of the cantonment on White River.

The Utes send hunting parties along the White River from their reservation in Utah, but there is little likelihood that they will make any trouble with the very few whites they meet in that country. There is no place suitable for a military post in that whole region west of the mouth of the Gunnison River, nor do I consider that a post is at all needed or likely to be needed there.

SCHOOL OF APPLICATION FOR CAVALRY AND INFANTRY.

The first class at the military school here graduated in July last, after a term of two years. I was present myself at the final examination, and can truly say that the results were not only satisfactory, but far beyond what any one had a right to expect at the very beginning of an experiment on so large a scale. The course of studies was long and difficult, and required constant and assiduous application. The final examinations showed clearly that all the young officers sent here for instruction have well used their time and opportunities. It must be gratifying to the General of the Army, as it certainly is to all of us related in any way to the school, to be fully assured that it is already a success, and that it promises a benefit to the Army greater than any project I have known for many years. It is certainly to be hoped that every proper assistance and encouragement will be given to it by the Government. Beneficial as of necessity it is to those who have entered the Army from civil life, without technical education for the military service, it certainly is almost, if not quite, as useful to the West Point graduate, who is here instructed in the practical application of the theories of war he learned at the Military Academy. The customs of the service and the details of military duty are here adhered to with fidelity, and a uniformity in the mode of doing duty in all its details will be carried back by every class to the regiments from which they were sent here, so that in time we may look for that uniform system in the performance of duty in the Army which has been conspicuously wanting.

The new class which reported here September 1 appears to be in all respects equal in every particular of character, ability, and zeal to the class which gradnated in July, and it certainly is a compliment to the new class that such a statement can be truthfully made. The course of studies for the present class will be somewhat different from that of the class which preceded it, mainly in the fact that the practical part of the course will be enlarged and the theoretical somewhat curtailed.

This modification is simply due to the experience gained in the past two years of the school concerning the subjects upon which most information seemed to be needed in the Army.

MILITARY PRISON.

The condition of the military yrison, the good work it has done, the efficiency of its governor and of the detailed officers, are too well known to require any extended report. If left to the management of the officers now having it in charge, without too much interference by those at a distance, it will continue to be well managed and of great benefit to the service and the Government. It, however, must more and more labor under the danger common to all successful public establishments of being used to test theories or special notions of persons not immediately responsible for its operations, or as furnishing what is supposed to be an agreeable station to those having friends at court.

TARGET PRACTICE.

The interest inspired two years ago in rifle-shooting in the Army has greatly increased, and has led to results as satisfactory as they are surprising. In 1880, in this department, but two men could be found who had made the scores necessary to qualify them as marksmen. To-day the records show eight hundred and eighty-three qualified marksmen in this department alone. I have no doubt at all that in a few years more, and with the same encouragement, there will be at least 50 per cent. of the enlisted men in this department qualified as marksmen. The immense value of skilled marksmen in this or any other Army is plain, and as the military inventions and conditions tend more and more to a system of skirmish fighting, which shall supplant the old systems of attack in line or in column, the value of the skilled shooting force will be more and more conspicuous.

The practice this year, preliminary to the selection of a department team, has shown a very great advance over that of last year. The shooting is at least 30 per cent. better, and far more steady and uniform. The orders in existence, if duly carried out, seem to be well adapted to continued improvement in shooting and increase in number of marksmen.

TRANSPORTATION.

The order requiring very great reduction in public transportation in this department has been duly executed, and, with the railroad system in operation within the department, will probably answer all purposes (with some small modifications) so long as the Indians give no trouble and no orders are sent here to furnish officials or official personages not of the War Department with spring wagons or other means of transportation. With such reduced transportation it is to be hoped that the officials of other Executive Departments of the Government will not hereafter arrive here with orders requiring that they be furnished with wagons, escorts, tents, horses, and almost everything else they can think of, out of the military supplies in this department. Scarcely six months pass without such demands upon the military resources of this department, and up to this time these demands have been supplied, though at times to the serious embarrassment of the military; but hereafter, as the War Department no doubt contemplated and intended, such demands cannot be met.

It is proper for me to say that with the reduced transportation we now have it is hard to see how it will be possible to get out a large force for field operations in case of a considerable outbreak of Indians. Fortunately the apprehension of such outbreaks is not serious, nor is it likely, under the present circumstances, that we may have to face such a contingency, but if we should the deficiency in Army transportation will become apparent at once, with no very clear prospect of supplying it.

GENERAL SERVICE CLERKS.

In previous annual reports I have several times taken occasion to invite attention to the important character of the services rendered at department headquarters by this class of men, and to the great disparity between the compensation they receive and that paid to civilian employés performing similar duties at the same headquarters. This disparity still exists, and is increased this year by the omission from the appropriation for the support of the Army of the item providing for the per diem of 35 cents to which they are entitled, and which constitutes an important portion of the amounts they usually receive.

I urge that this omission be remedied by appropriate legislation at the earliest possible date, and as an act of the merest justice, and that the matter be so arranged that these men may receive this per diem from the beginning of the current fiscal year.

I respectfully invite attention to the highly intelligent and efficient manner in which their duties have been performed by the officers of the general staff serving at these headquarters, as follows, viz: Col. Judson D. Bingham, chief quartermaster; Lieut. Col. D. L. Magruder, medical director; Maj. George Bell, chief commissary of subsistence; Maj. W. R. Gibson, chief paymaster; Maj. Henry Goodfellow, judge-advocate; Maj. E. R. Platt, assistant adjutant-general; Maj. J. J. Coppinger, acting inspector-general; Capt. D. M. Taylor, chief ordnance officer, and First Lieut. O. M. Carter, chief engineer officer.

I am, colonel, respectfully, your obedient servant,

JNO. POPE,
Major-General, U. S. A., Commanding.

Col. R. WILLIAMS,
Assistant Adjutant-General,
Military Division of the Missouri, Chicago, Ill.

HEADQUARTERS DISTRICT OF NEW MEXICO,
Santa Fé, N. Mex., September 26, 1883.

SIR: I have the honor to submit the following report of the movement of troops and condition of affairs in the district of New Mexico since October 1, 1882:

OPERATIONS FROM FORT LEWIS.

On October 1, Capt. J. W. Beau, Fifteenth Infantry, was in camp near Farmington, N. Mex., on the Lower San Juan River, with his company (H), having been sent to that vicinity in the preceding July to allay the fears of the settlers and prevent trouble between them and the Navajo Indians, who, it was reported, had occasionally stolen ponies from the settlers, used insolent language to them, and annoyed them in various other ways, all of which caused a general feeling of insecurity.

There is no doubt that part of these troubles were due to a bad element among the white men, some of whom were engaged in selling whisky to the Indians, but against whom no evidence was obtained sufficient to secure conviction.

On September 26, Captain Bean reported that Indians who were at Cañon Gallegos said that they had permission to remain there, and should do so. October 3, a company commanded by an officer junior to Captain Bean was ordered sent from Fort Lewis to report to him, and instructions were sent Captain Bean to arrest all Indians who had gathered their crops and refused to move, except such as desired to sever tribal relations and settle in severalty under the statutes (Supplement to the United States Statutes, section 15 of an act making appropriations to supply deficiencies in the appropriations, &c., chapter 131).

October 4, Agent Galen Eastman was written to by me, inclosing extract of the letter from Captain Bean to Captain Marshall, in which he stated Indians had said they had been to their agent and he had told them they could remain. The agent was requested in my letter to take energetic measures to cause the Indians to move at once from that vicinity to their reservation.

October 12, Captain Bean was ordered to cause all Indians to return to their reservation who were absent without authority.

October 14, Captain Bean acknowledged the receipt of these instructions, and reported the arrival of the additional company and change in the location of his camp 8 miles up the river, near entrance of the Cañon Gallegos; also that he had sent runners to the chiefs to gather for a talk, and that he would notify the Indians as fast as possible and ascertain their intentions.

October 21, Captain Bean reported that he had a conference on the 17th with two chiefs and about thirty Indians, representatives from their camps up the river and in Cañons Largo, Gallegos, and Blanco. They said that Manuelito had told them they could remain; he was their great captain, and they had to obey him as soldiers obeyed their captains. In reply they were told that Manuelito had no authority off their reservation, and if he was there he would have to go back also. They said there was no grass, wood, or water on the reserve; their families would suffer with cold and their sheep starve to death, &c.; that the boundary line had never been surveyed and they did not know where it was. Captain Bean told them the last was only an excuse; the orders to return to the reservation must be complied with in twenty days; if necessary, troops enough to make them do it could be obtained, and that they must not return after his departure, which was finally agreed to by the Indians. In his report Captain Bean urges a survey of the boundary line.

October 29, Captain Bean reported that he believed the Indians were moving, and all would be moved at the end of twenty days, and if not on reservation, at least near enough to it for practical purposes.

November 11, Captain Bean reported that Indians had returned to their reservation, and on the 13th his command was ordered to return to Lewis.

January 24, 1883, commanding officer Fort Lewis forwarded extract from private letter that Indians were on Lower San Juan, threatening the lives of settlers.

February 26, Captain Conway, Twenty-second Infantry, scouted to the Lower San Juan with his company, where he found a few Indians off the reservation, who, however, took steps to return when they were ordered back. They caused some annoyance, but no serious trouble was anticipated.

April 17, Colonel Stanley reported he had visited the Lower San Juan and met a great number of Indians with large herds of sheep off the reservation, who refused to move south of San Juan when ordered to do so. This report was forwarded to department headquarters, requesting that Major Henry and four companies cavalry be ordered sent to report to Colonel Stanley.

May 28, two troops of the Ninth Cavalry were ordered from Fort Riley to Fort Lewis, and arrived June 6.

July 10, Captain Rucker, Ninth Cavalry, reported a scout to the Lower San Juan, but saw no Indians with herds.

July 26, Lieutenant Burnett, Ninth Cavalry, reported a scout of ten days to that region, where he found no trouble.

August 1, Lieutenant Guilfoyle, Ninth Cavalry, reported a scout to the Lower San Juan and to Utah. Found a few straggling Navajoes and some Piutes on or near the reservation. Reported that some Navajoes were said to be in Blue Mountains, Utah.

August 31, Colonel Stanley, Twenty-second Infantry, commanding Fort Lewis, reported Indians quiet and on the reservation, and no further use for the troops of the Ninth Cavalry. Later, on same date, he reported the killing of Peter Tracy, a ranchman, on August 28, on the Lower San Juan.

September 4, Lieutenant Guilfoyle reported result of his investigation of Tracy's murder, and that there was no special alarm.

September 7, citizens on Lower San Juan, fearing Indians, asked for troops to be stationed at or near McElmo's ranch, which petition was forwarded to department headquarters.

The survey of the eastern boundary line of the Navajo Indian Reservation was made by Lieut. M. C. Martin, Twenty-second Infantry, assisted by Lieut. H. C. Hodges, jr., Twenty-second Infantry, officers of the garrison of Fort Lewis. The survey was commenced May 2 and completed June 16, 1883.

OPERATIONS FROM FORT WINGATE.

In compliance with department letter of May 10, 1883, Lieutenant Parker, Fourth Cavalry, was sent from Fort Wingate to make a reconnaissance and examination of a certain described tract of country around the post. From May 20 to June 6 was absent on this duty, going as far as the American Valley; and again from June 14 to July 3, going as far as Fort Lewis, Colo. His notes are on file at department headquarters.

April 18, Colonel Bradley, Thirteenth Infantry, reported that he sent Lieutenant Parker, Fourth Cavalry, with a detachment of cavalry to the place where trouble with Navajoes was reported (a camp occupied by a small party of men who were digging for mineral oil, some 15 miles north of Fort Wingate), who found the report to be without foundation.

August 23, Lieutenant Huse, Fourth Cavalry, and 20 men, were ordered to the Navajo Agency to protect the agent in making some arrests.

September 7, Capt. Allen Smith, Fourth Cavalry, with Troop A, Fourth Cavalry, and Company I, Thirteenth Infantry, were ordered to the agency to assist the agent.

September 10, Captain Smith reported from agency that the bad element among the Indians had acceded to the agent's request, and that no trouble was anticipated.

September 13, Captain Smith reported from camp, 20 miles north of the agency, that Indians were assisting the agent to capture the murderer of Tracy.

September 17, Colonel Bradley reported the arrest of the murderer of Tracy, who was then in Captain Smith's hands.

September 16, Lieutenant Gilman, Thirteenth Infantry, was sent to Navajo Springs, Ariz., with a company of infantry, on account of threatened conflict with Indians caused by a Navajo being reported killed, and reported no trouble anticipated.

September 20, Colonel Bradley reported the Indian who murdered Tracy was in confinement in the guard-house at Fort Wingate; that at the request of Superintendent Smith, of the Atlantic and Pacific Railroad, Company G, Thirteenth Infantry, was sent to Navajo Springs on September 16, and returned to post on the 19th with a man named Owens, who was arrested by Agent Riordan, charged with the murder of a Navajo; that the agent reported the Indian difficulties on the reservation were settled satisfactorily to all parties. Reports that he had ordered Troop A, Fourth Cavalry, to the post.

OPERATIONS FROM FORT STANTON.

September 25, 1882, Lieutenant Wood, Fourth Cavalry, left Fort Stanton with troops B and D, Fourth Cavalry—73 enlisted men, 4 officers, 2 Indian guides, 1 Mexican guide, 1 acting assistant surgeon, and supplies to include October 20—to capture or destroy a party of renegade Indians, principally Mescalero Apaches, most of whom had left the reservation two or three years before, and were believed to be on the Staked Plains, if they were not in old Mexico. Owing to small supply of water, one troop was sent back, and afterwards all the rest except 3 non-commissioned officers and 15 men.

Lieutenant Wood continued on with them, carrying fifteen days' rations, but when within three days' march of objective point had a two days' march ahead without water, and the supply in rear was too small to be depended on for more than two days.

He returned, having seen no signs of hostile Indians except in first few days, and they were then several months old.

October 19, Roman Chiquito, Horse Thief, and Maria's Boy were sent from Fort Stanton to Fort Union, under guard, and from Union they were sent to Fort Riley for confinement, November 2.

October 21, Indian Agent Llewellyn reported the arrival of seven Indians at the agency who had been absent since April, 1880—one old man, his two sons, two women, and two children.

Lieutenant Gale was ordered by commanding officer Fort Stanton to take charge of them till their cases were disposed of. They were ordered by the district commander to be turned over to the agent. These Indians reported a band of eight men, eight women, and fourteen children in the mountains to the south, who wanted to come in, but were afraid of being placed under the custody of the military authorities.

November 14, two Indians, supposed to be Muchacho Negro and Ishpia, fired into Nautzilia's camp about 9 p. m. Lieutenant Gale, with a detachment, followed in pursuit, came in sight of the Indians, and forced them to abandon their ponies and blankets.

January 28, 1883, Lieutenant Wood, with detachment of B and D Troops, Fourth Cavalry, left Stanton to scout in the vicinity of Guadalupe Mountains for renegade Mescaleroes. Returned February 5, having seen no signs.

March 27, Lieutenant Gale, with detachment of Troop I, Fourth Cavalry, started to Upper Penasco in search of Indians who had stolen several horses. Found one pony trail going toward agency, but lost it

after a time and was unable to pick it up again. Divided command into two detachments that made large circuit, but could find no signs. Returned to camp March 30.

Indian agent had ordered Nautzilia's band and Three Rivers Indians to move close to agency, where they were closely watched to keep them from having communication with hostiles.

Troop B, Fourth Cavalry, left Stanton for Selden, April 4.

Lieutenant Gale left Stanton April 18 for Mescalero Springs after Indians who were reported to have been in that vicinity a few days before. Returned May 5, reporting no signs.

In June transportation was ordered furnished from Stanton to bring Mescalero Indian delegation to Selden, *en route* to Santa Fé celebration.

June 5, agent reported news of arrest of Muchacho Negro at Fort Sill, Ind. T.

June 18, agent reported troops no longer needed at agency.

The survey of the Mescalero Indian Reservation was commenced October 23, 1882, by Lieutenant Cecil, Thirteenth Infantry; stopped November 16, on account of snow; resumed February 27, 1883, and continued with some interruption, till May 8, when it was concluded.

OPERATIONS FROM FORTS CUMMINGS AND BAYARD.

March 27, 1883, Lieutenant-Colonel Forsyth, Fourth Cavalry, commanding Fort Cummings, reported that Colonel Royall had telegraphed that W. T. Beach, superintendent Grand View Mine, Ariz., near Richmond, telegraphed that Indians attacked his place 3 p. m. the 26th, and killed two men, and asked for help. He (Colonel Forsyth) had ordered two troops at Bayard to Richmond at once; would start at once himself for same place, via Lietendorf's Wells, where he thought they would come out. They were supposed to be a small force of renegade Apaches from San Carlos. A second dispatch from the operator at Lordsburg to Lieutenant-Colonel Forsyth says: "Reported that large band attacked Swing's Station, Ariz., 7 miles south of York's ranch, at 8 a. m., 27th, and killed 5 men." On this report Forsyth ordered Captain Thompson, Fourth Cavalry, commanding the two troops ordered from Bayard, to go via Lordsburg road to intersection of San Carlos road that leads to Richmond, and if he found the trail to follow it. At 11.40 a. m. Forsyth reported: "Just leaving; will push on and join Thompson to-night."

Same date two troops of cavalry at Craig were ordered to Deming by rail. Courier sent from Cummings to notify Forsyth to send orders to them at Deming; if none were received there they were to go on to Lordsburg for orders.

General Crook was notified of the above reports and disposition of troops by the district commander.

Captain Marshal, assistant quartermaster, chief quartermaster of the district, was sent south to attend to supplying the troops in the field.

General Crook reported that a small party of Chiricahuas commenced raid near Huachuca on 21st—trail leading east. Lost at Railroad Pass. Unconfirmed reports said they had been in vicinity of York's ranch, on Upper Gila. Colonel Forsyth ordered Craig troops to Lordsburg, to await orders, unless they heard of Indians, in which case they were to pursue.

March 29, Captain Marshall, at Lordsburg, reported that "stage-driver, Silver City, reported finding of Judge McComas's body 19 miles from Lordsburg; number of Indians unknown. Forsyth arrived at sun-

set and started with four companies at 4 a. m. Thompson reported near Richmond." Second dispatch is a message from Forsyth, sent by Captain Marshall; states "bodies of Judge and Mrs. McComas found, but not the boy's; Forsyth on trail leading through foot-hills, Burro Mountains. Thinks they are striking for Mexico, and will probably cross railroad at Separ. Thinks there are 15 to 25 Indians; no squaws, as there were no mutilations."

Marshall ordered a special train for Thompson's command, to take it from Stein's Pass to Separ.

March 30, Marshall telegraphed from Separ that Forsyth crossed railroad on trail 12 miles west. Indians reported near Alaman Springs on 29th, and that Thompson had scouted to Stein's Pass without seeing signs.

April 1, Marshall telegraphed from Separ: "Royall reports dispatches received from operator, Silver City; information by special messenger who arrived at 7 a. m. on 30th ultimo; 16 Indians seen near Gila, rounding up stock. Large trail toward Rock Cañon; man wounded and team captured by Indians. Operator says it is reliable." Colonel Royall, Fourth Cavalry, commanding Fort Bayard, was telegraphed to from district headquarters to ascertain the truth of this report.

April 2, Forsyth, at camp 20 miles south of Alaman Springs, head of Walnut Creek, reported via Separ as follows:

Followed trail from railroad to trail crossing Chiricahua Mountains, almost 3 miles south of Cottonwood Springs. (See trail sheet, map 31.) Here Indians had attacked wagon loaded with ranchman's supplies, wounding both men who were with it, taking two mules, two rifles, ammunition, and provisions; then entered rocks and scattered. Could not trail them. Went to Double Adobes for water, and encamped at Gray's ranch, in Animas Valley. To-day came here; saw several separate mocasin tracks two days old. Will stay and scout adjacent country. Indians obliged to kill three horses on trail from railroad to Cottonwood Springs. Band numbers 17, 8 extra horses.

April 2, Captain Marshall was directed as follows:

Send orders to Forsyth to move greater part of his command to Separ, and thence to vicinity of Richmond, as a large body of Indians are coming up through Sonora and might break through that way. Can leave two companies where he now is, but may bring back all, or at least four, and come with them himself.

April 3, Colonel Royall reports that Indians are said to be camped on Little Blue, 17 miles from Mangus Springs. Settlers want protection. Can send out about 40 infantry. Is getting ready. Will send Captain Eskridge, Twenty-third Infantry, mounting as many men as possible—10 men.

April 3, B Troop, Fourth Cavalry, was ordered by district commander to proceed from Fort Stanton to Fort Selden in five days.

April 4, Colonel Forsyth telegraphed from Separ: "Arrived with six companies; left one company, Sixth Cavalry, on Walnut Creek that will move to Fort Bowie to-morrow. Indians went out west side Hatchet Mountains."

April 4, B Troop left Stanton.

April 5, Forsyth directed to select camp in vicinity of Richmond, and to arrange with Marshall about supplies, and make men comfortable. He was informed that a large party of Indians were coming up from Sonora, but from direction taken would probably not reach his vicinity, but that part of the country should not be left unprotected at that time.

Colonel Forsyth was authorized to order infantry from Cummings to take charge of his camp in case he had to go off with the cavalry, and was told that one company of cavalry would be at Selden if needed.

April 5, Forsyth telegraphed from Separ: "Will start to comply to-

morrow morning." Marshall was ordered to arrange for supplying Forsyth, then to return.

April 6, General Mackenzie went to Lordsburg to see Forsyth and Marshall.

April 6, Forsyth telegraphed the following from Separ:

At sunset yesterday received word that railroad inspector had seen 12 Indians cross railroad 10 miles east, going north. Lieutenant McDonald sent out with 20 men on gallop to find trail, which they did before dark. Sent Thompson, 2 companies and some scouts, to take up trail. Will remain till I hear from Thompson the direction taken. Scouts sent west report no trail.

Reported later that trail was made by citizens or smugglers from Mexican line.

April 6, Forsyth was ordered to camp near Richmond or Separ, and to send Bayard companies back.

April 13, Captain Thompson submits report of operations of two troops of cavalry sent from Fort Bayard under his command. Left post 27th; went via Silver City to Burro Springs, Horse Shoe Cañon, Doubtful Cañon, to Stein's Pass Station. Twenty-ninth, took cars, joined Forsyth near Lordsburg, and went with him. On 7th, found that a train of some citizens turned out to graze had caused the report of Indians near Separ. Arrived at Richmond with Forsyth's battalion on 9th; left for Fort Bayard on 11th; reached it on 12th.

April 8, Captain Eskridge reported that he found that citizens had made a two days' trip up Blue Creek, where the Indians were supposed to have a rendezvous, but found no sign. The citizens had started from Reihl's ranch, on Middle Gila. Indians had been in that vicinity several days before; stole 40 or 50 head of stock on Upper or Middle Gila and shot one man.

A topographical survey of the section of the Territory from the San Francisco River on the north to the Mexican boundary line on the south, and for about 70 miles east from the Arizona line, was commenced June 14 and completed July 26, 1883, by Private Hugh Hartmann, general service, on duty as topographical assistant at district headquarters. (See map, blue print.) The work was very well done.

By indorsement from department headquarters of July 6, 1883, the district commander was ordered to furnish cavalry escort for the Jicarilla Apaches, on the application of the agent, to move them from the Jicarilla Agency, near Amargo, to the Jicarilla and Mescalero Reservation, near Fort Stanton, N. Mex.

Captain Rucker, Ninth Cavalry, at Fort Lewis, was ordered July 19 to escort them with his company as far as Santa Fé.

July 20, the agent reported discontent among the Jicarillas on account of short issues of rations, stating that half were opposed to the move, and 150 were absent hunting. July 27, he reported to the same effect, and that wagons ordered by Interior Department had not arrived. August 8, he reported that he had learned that wagons were shipped to Las Cruces for the Mescalero Agency and were then en route to the agency; that he would that day send for the troop of cavalry at Fort Lewis and start, using what wagons could be picked up, as soon as he got authority to purchase supplies.

August 16, Colonel Stanley reported:

That opposing factions of the Jicarillas came near having a battle on the subject of removal. The chief of the opposing faction wanted land not thrown open to settlement until he could bring his claim to the notice of the authorities at Washington. Captain Rucker had arrived. Agent expected to start on August 19.

Lieutenant Gale, Fourth Cavalry, with a detachment of Troop I, Fourth Cavalry, was ordered September 1 to proceed with Jicarillas

to their reservation from camp near Santa Fé, to which point they had been brought by Captain Rucker. Lieutenant Gale is still *en route* with these Indians.

In conclusion, my views as to the important posts in the district have not materially changed since reports to department headquarters which have from time to time been made heretofore. I regard Bayard as an important post on account of its bearing on the Indians on the San Carlos Reserve, and on those still in the Sierra Madre, in Mexico. It is a healthy place for troops, and I think it would be advisable to increase it as soon as can be done to four companies of cavalry, four of infantry, and eventually to six companies of cavalry and four of infantry.

Wingate should he increased by two companies of cavalry, while the remaining three companies of cavalry should be held at Stanton, in the vicinity of which the Indians are now being doubled in numbers by the addition of the Jicarilla Apaches. There should also be four companies of cavalry and two of infantry added to the garrison of Lewis, but I have not in my command now the troops of the cavalry arm to send.

The importance of Lewis is due to its bearing on the Southern Utes and Eastern Navajoes.

In short, the four important posts in the district are surely Wingate, from its bearing on the Navajoes, and also on the Apaches in Arizona; Lewis, from reasons just given; Stanton, from its position near the Mescalero and Jicarilla Reserve; and Bayard, from its being an excellent position in South western New Mexico.

It to me appears that Cummings might better be abandoned, keeping there only a small detachment from Bayard, and that Selden and Craig might be given up.

Union should be kept for a time for the shelter of troops, and Bliss should be retained at its present strength on account of its position having a slight international bearing, but by no means increased in garrison.

The whole gist is to get the most of the troops in the four large healthy posts which I have named, which are all in good positions. The cost to barracks and quarters would be about $120,000, and not exceed $150,000. This is, of course, only a very rough estimate.

I wish to add, in connection with the movement of the Jicarillas, that Colonel Stanley gave great personal and official aid to the agent to the end that the Jicarillas should move quietly; this of his own good judgment, and not from orders.

Colonel Bradley, commanding at Wingate, has very promptly supported Mr. Riordan, the agent of the Navajoes, and I have to notice that it was the good conduct of Mr. Riordan, his support by troops under Lieutenant Lockett, Fourth Cavalry, and the loyal aid of Navajo Chief Francisco Capitan, that enabled Mr. Riordan to capture the murderer of Tracy, killed recently in Southeastern Utah.

I acknowledge my indebtedness for good service and aid during the past year in matters of service to my personal and district staff, and to the regimental commanders, and to subordinate officers generally, for habitual good conduct.

Lieutenant Colonel Forsyth's conduct in the field during the past two years has been very good, and Major Van Horn's support to Agent Llewellyn, in his disarmament of two bands of Mescaleros, and the arrest of insubordinate Indians, was brilliant. This occurred in September a year ago.

In closing this paper, I wish to call the attention of the department

commander to the complete inadequacy of the pay of the present agent of the Mescalero and Jicarilla Indians, and of that of the Navajo Indians. They get $1,500 a year, and taking the risks they have to face, the ability, courage and good character that these officers must possess to do their duty, they should be paid, the agent for the Mescaleros and Jicarillas, not less than $4,000 a year, and the Navajo agent not less than $6,000. The government of a vast body of men, as is in the case with the Navajoes, is committed to a man, who, to fill it, should have the highest force, intelligence, and integrity; and the good governing of the Mescaleros and Jicarillas is a matter of great importance to the Government, and the people of Southeastern New Mexico. In giving these sums, I am not leaning to either of the two agents, and name the larger amount for the Navajoe's agent, on account of the great number of the tribe.

Very respectfully, your obedient servant,

R. S. MACKENZIE,
Brigadier-General U. S. Army, Commanding.

The ASSISTANT ADJUTANT-GENERAL,
Department of the Missouri, Fort Leavenworth, Kans.

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3 D.—REPORT OF BRIGADIER GENERAL C. C. AUGUR.

HEADQUARTERS DEPARTMENT OF TEXAS,
San Antonio, Tex., September 21, 1883.

SIR: I have the honor to submit the following report of the condition of military affairs in this department for the past year. During the period covered there has been no trouble with Indians. On two occasions it was reported that the Mexican troops, in their operations against some Indians still in Mexico, about the Santa Rosa and San Carlos Mountains, had driven some of them across the Rio Grande; but prompt operations of our troops, and careful investigation, showed these reports to have been incorrect. Certainly no depredations were committed, and, in fact, there is no reason to believe that a hostile Indian has been within the limits of this department during the past year.

Sub-posts are kept up at Del Rio, Mayers Spring, and Pena Colorado, Tex., between the line of settlements and the Rio Grande, and covering the country opposite the Santa Rosa and San Carlos Mountains, in Mexico, whence the Indians are liable to be driven across the river.

The sub-post at Presidio del Norte, Tex., has been abandoned. One reason for this was the apparent impossibility of procuring a proper site with good title; another was that the place had lost much of its former importance since the completion of the railroad from El Paso to Chihuahua, thus diverting the great trade with that city which formerly passed through Presidio del Norte; moreover the troops there were very uncomfortably fixed, and there seemed no way of making them comfortable, except by an expenditure not warranted by any existing necessity. Instead of this sub-post, a troop of cavalry, from Fort Davis, Tex., is kept patrolling along the line of the Rio Grande, from opposite Del Norte to south of Viejo Pass. This, it is believed, will give a more effective protection to interests in that vicinity than could have been done from the sub-post. The sub-post at Camp Rice, Tex., will cover the country between Viejo Pass and that camp.

With a view of learning what is being done in the country north of Concho, I directed, last month, a troop of cavalry to be sent from that

post to Mackenzie's old camp, to examine the intervening and surrounding country. The troop has returned, but the officer's report has not, as yet, been received.

The chief engineer officer of the department is engaged, with an expedition, in completing the survey of the country west of the Rio Pecos, including the region about the Chisos and Chenati Mountains, thus to finish and connect his previous explorations and surveys in Northwestern Texas. Although there were no funds specially applicable for this work, I regarded it as of so much importance that the party was fitted out from the allotment for the current expenses of the department, with the proviso that the expenses of the work should cease by the last day of October. This officer's report is not likely to be ready for transmission with this report, but it will be forwarded as soon as received.

The post of Fort McKavett, Tex., was abandoned on June 30, and the site, and property belonging to it, turned over to the owners. The public property there was either sold, under proper authority or transferred to Fort Concho, Tex. Its garrison of one company of the Sixteenth Infantry was sent to Fort McIntosh, Tex.

It had been the intention to abandon, at the same time, Fort Stockton, Tex., but the additional quarters at Fort Davis, where the troops at this post were to go, not being completed, and the proprietors of the site of Fort Stockton, and citizens in the vicinity, being so anxious to keep the post there as to offer the site for another year at a mere nominal rent, it was thought best to allow the troops to remain another year. By the authority of the lieutenant-general this has been done.

By orders from the War Department, the post of Fort Duncan, Tex., was abandoned on the 31st August, and the site and buildings pertaining thereto were turned over to the agent of the owner.

The public property there was either sold under proper authority or transferred to Fort Clark, Tex., and the depot in this city. The troops stationed there were sent to Fort Clark. To relieve this latter post somewhat, of its crowded condition, one troop of cavalry was sent from it to the post of San Antonio.

On the lands recently acquired by the Government near department headquarters, were scattered around a number of small wooden houses.

These have been removed into a convenient locality, and improved, so as to make six temporary sets of officers' quarters, and one school-house. These, with the quarters that can be spared, at present, from the headquarter buildings, and the renting of one small house, will furnish quarters for the officers of the five companies now at the post of San Antonio.

Abstract B embraces all movements of troops within the department, among them the transfer, in November last, of the Twenty-second Regiment of Infantry to the Department of the Missouri, and, in December following, the transfer of the headquarters Nineteenth Infantry and the companies of that regiment at Fort Brown, Tex., except one to Fort Clark. The transfer of the Nineteenth Infantry, as stated, was under the orders to reduce the garrison at Fort Brown to two companies.

Attention is respectfully invited to the report of the adjutant-general of the department, enclosing abstracts marked, respectively, A, B, C, D, and E; also to his remarks in connection therewith.

I beg to renew my recommendation of last year, "that the general-service clerical force at division and department headquarters be abolished, civilian clerks to be substituted therefor."

Post schools are not as successful as could be desired, and I do not

think they will be until good school-houses and competent teachers shall have been provided.

The report (F) of the inspector refers to the accounts of the disbursing officers being, generally, well and accurately kept, and recites that the inspections of the troops show an improvement in drill, appearance, and general condition.

Attention is invited to the views of the judge-advocate, marked G, on the subject of garrison courts-martial, and the desirability of definite and authoritative action regarding the rights of parties on trial to summon witnesses at their pleasure and the discretion of the court.

In connection with paragraph II, General Orders No. 130, series of 1882, from the Adjutant General's Office, and General Orders No. 24, same series, from these headquarters, I invite special attention to the report of the judge-advocate (G, 1) on the subject of desertions; it is one full of interest. All the information obtainable on the subject has been carefully arranged, and, as far as possible, tabulated for convenient reference and comparison. It contains, also, the views of commanding and company officers on the question of desertion generally; also views of enlisted men; and yet it fails to afford satisfactory data for establishing any theory accounting for the large number of desertions. It does not, however, sustain the theory, so loudly and so persistently announced, that the amount of work required of soldiers is the cause. This working of soldiers may at times have been abused, and probably has been, but, as a general thing, it is not believed that it affords a sufficient cause for serious complaint. Most of the work now required of soldiers is of a character benefiting themselves or their command, and is as much the duty of a soldier as the handling of his musket, and in no way interferes with his instruction as a soldier.

The soldier whose mind and body are generally and judiciously occupied is a healthier and a better man than the idle one, and, from my experience and observation, not so likely to become dissatisfied or to desert. There is a great deal of loose talk about this subject of soldiers being required to work, both by those who know nothing of the matter, as well as by those who ought to know better. Statistics fail to show it to be an exciting cause for desertion. Of the two hundred and ninety-two deserters reported upon, only twenty-six deserted from *extra* or *daily* duty, and two of these deserted after robbing a safe of the subsistence department.

So long as desertion is not considered a crime by the community generally, nor even as disgraceful, the only inconvenience the deserter has to apprehend is that he may be caught, tried by court-martial, and confined for two years at the Leavenworth prison. This has no terrors for the average deserter, who enlisted to avoid work and to have an easy time, as from current reports he is led to believe he will secure both these objects more surely at the prison than in the Army.

The report (H) of the chief quartermaster gives a full statement of the operations of that department, and furnishes interesting and useful information as to lands acquired for military sites, and the condition of the fund authorized by act of Congress for that purpose. His statement concerning the condition of officers quarters and barracks for troops is entitled to the attentive consideration of the proper authorities. The quarters in this department for officers or enlisted men, except at department headquarters, are neither sufficient nor of a proper quality.

Nothing has yet been done under the orders to build a single company post at Camp Rice, as the title to the site has only just been

approved by the Attorney-General of the United States. As soon as the transactions connected with this matter are completed proper steps will be taken to carry out the orders referred to.

The report (I) of the chief commissary of subsistence furnishes satisfactory evidence that the troops in the department have been carefully and abundantly supplied with such articles of food as are authorized.

Company commanders and enlisted men generally complain of the action of the subsistence department in issuing pork in lieu of bacon, limiting the issue of the latter to troops in the field.

Enlisted men prefer bacon as food, and claim that it goes farther. The troops in this department, in garrison, are issued salt meat three days in ten. It is recommended that at least one-half of this issue be bacon.

The full and interesting report (J) of the medical director upon the general health of the troops in the department, and particularly the portion of it referring to the yellow fever epidemic at Fort Brown during last year, is worthy of special attention.

The reports of the chief paymaster and the signal officer (K and M) respectively show in detail the operations of their departments.

The report (N) of the officer supervising target practice shows an encouraging improvement in that essential part of soldier's instruction. I regret that the full report for the target year cannot, under existing orders, be made in time for this report.

To the officers of the general staff at these headquarters, and to my personal staff, I am indebted for faithful and efficient service.

I am, very respectfully, your obedient servant,

C. C. AUGUR,
Brigadier-General Commanding.

The ADJUTANT-GENERAL,
Military Division of the Missouri, Chicago, Ill.

4.—REPORT OF MAJOR-GENERAL HANCOCK.

HEADQUARTERS MILITARY DIVISION OF THE ATLANTIC,
Governor's Island, New York, October 8, 1883.

SIR: In obedience to the instructions contained in your letters of September 19 and September 29, 1883, I have the honor to submit for the information of the General of the Army the following report of operations within the Military Division of the Atlantic during the past year:

The geographical boundaries of the division are the same as at date of last report. It is divided into two departments, East and South, the former being under my immediate command, with headquarters at Governor's Island, New York. The Department of the South was, until the 14th of September, 1883, under command of Col. Henry J. Hunt, Fifth United States Artillery. Upon the date mentioned Colonel Hunt was retired from active service, agreeably to the provisions of section 1 of the act of Congress approved June 30, 1882, and under the instructions of the honorable Secretary of War the Department of the South was placed temporarily under my immediate command, and it so remains at this date. I therefore, at the present time, immediately command the Division of the Atlantic as well as its two geographical departments.

The aggregate of troops serving in the division on the 30th of September, 1883, was, according to the last returns, as follows:

	Commissioned officers.	Enlisted men
Headquarters Middle Division of the Atlantic	8	14
Department of the East	270	2,102
Department of the South	73	475
Total	351	2,591

On the 30th of September, 1882, the strength of the division in troops was 348 officers and 2,669 enlisted men.

There have been but few movements of troops within the division during the past year; none to and but one from it. At the date of my last report, October 21, 1882, the garrisons of Washington Barracks, D. C., and Fort McHenry, Md., were in summer camp at Gaithersburg, Md. After a profitable season of instruction in the military duties incident to camp life, the troops, on the 2nd of November, 1882, broke camp, and, under the command of Col. R. B. Ayres, Second United States Artillery, marched to their permanent stations by a selected route, calculated to benefit men and horses, and somewhat inure them to the requirements of active service in campaign. This year again, in June last, the troops from Washington Barracks and Fort McHenry, Md., marched into camp at Gaithersburg, and still remain there, under the command of Colonel Ayres. The encampment, however, will be terminated in the course of a few days, probably this week. A return march by way of certain historical battle grounds in Virginia and Pennsylvania was projected by Colonel Ayres, but the necessary transportation for supplies, &c., not being available, the march, under advice from the Secretary of War, has had to be abandoned. In last year's report I expressed my opinion of the great benefit to officers, men, and horses accruing from this summer encampment, where experienced officers are present to impart instruction in the most essential part of a soldier's education—the knowledge of how to do his proper part under the exigencies of actual warfare. The routine life in garrison, while it may inculcate habits of discipline, and afford opportunity for training in the use of arms and for teaching the tactical drills, cannot teach the soldier to any appreciable extent what it is so necessary for him to know when called upon to undergo the fatigues of the march, and bear with the hardships of temporary camps and the constant duty required of him in field operations. These annual encampments, therefore, meet with my cordial approval, and I only regret that means will not permit all the troops in this division, whose duties all the year round are generally the routine ones pertaining to permanent stations, to be assembled at convenient points in summer camps.

It was contemplated to encamp the Twelfth United States Infantry, serving in the department of the East (distributed amongst three posts), during the past summer, but for want of proper facilities the project project was abandoned.

In December, 1882, the garrison of Fort Barrancas, Fla. (batteries B, E, and K, Third United States Artillery), which had on account of the danger of yellow fever been removed during the dangerous season to Mount Vernon Barracks, Ala., returned to its station at Pensacola, Fla. This year, early in the summer, there was grave anticipation that the ports of Florida might again be severely ravaged by yellowfever. Accordingly Capt. John L. Tiernon, Third United States Artillery, the commanding officer at Fort Barrancas, made timely application to move his command into a healthy encampment until the dangerous season had passed. With the approval of the General of the Army a suitable loca-

tion was decided upon in the vicinity of Atlanta, Ga., and batteries B, E, and K, Third Artillery, of Fort Barrancas, went into camp there June 25, 1883, a small guard being left at Barrancas in charge of First Lieut. Charles F. Humphreys, Third United States Artillery. The anticipations of a sickly season proved well founded, and the navy-yard at Pensacola, in the immediate vicinity of Fort Barrancas, has suffered heavily from yellow fever this summer. The small guard left at Fort Barrancas was in good time movedin to Fort Pickens, and was soon followed by the United States marines from the navy-yard at Pensacola. I am able to state that owing to these timely precautions no case of fever has occurred amongst the troops at any of the posts in the South. At Saint Francis Barracks, Saint Augustine, Fla., the troops suffered somewhat severely in October, 1882, from dengue fever, but there were no fatal results. Otherwise the health of the command in general has been exceptionally good.

In my last report I adverted to the transfer of the military reservation at Tampa, Fla., to the Interior Department, and the steps then in progress to transfer the troops at Fort Brooke to other posts. In December, 1882, the arrangements were completed, and on the 21st of that month battery G, Third United States Artillery (Barstow's), was transferred to Saint Augustine, Fla., to replace Battery F of that regiment, selected as a mounted battery and transferred to San Antonio, Texas, December 20. Batteries I (Myrick's) and L (Hess's) were on the 23d of December, 1882, transferred to Mount Vernon Barracks, Ala., and now form the garrison at that post.

In the department of the East the only changes have been the transfer of Battery G, Fifth United States Artillery, from Fort Hamilton to Fort Columbus, New York Harbor, June 4, 1883, and the return of Battery M, Fifth United States Artillery, from Fort Wadsworth, where it had been stationed as portion of the guard maintained at that post, to Fort Hamilton, its permanent station, on the 6th of June, 1883, leaving one battery at Fort Wadsworth. The addition of a battery to the force at Fort Columbus was much needed, the extent of the post and the presence of division and department headquarters and the presence of a large number of military prisoners making duty more than usually onerous.

The wishes of the General of the Army expressed to me a few years ago that each artillery post should have at least two batteries as its garrison, so that proper instruction in heavy artillery tactics might be afforded, have been carried out with the exception of Fort Preble, Portland Harbor, Me., at which post, owing to a lack of accommodation, there is still but one battery of Artillery (M, Fourth Regiment). It is my purpose to station another battery there, should it be found practicable to furnish the amount necessary for the additional quarters heretofore estimated for. The papers in the case are now with the War Department, and I can only reiterate what I indorsed upon them a few days ago, that the additions are extremely desirable to make Fort Preble a two-company post and keep its professional instruction up to a respectable standard.

Under the present system of distribution of the light batteries of artillery I have in my command four, one at the headquarters of the Second United States Artillery, at Washington Barrack, D. C., one at Little Rock barracks, Ark., one at the headquarters of the Fourth United States Artillery, at Fort Adams, R. I., and one at the headquarters of the Fifth United States Artillery, at Fort Hamilton, New York Harbor. The light battery at Washington barracks is now well provided for in

point of quarters and stables, but not so the light batteries at Little Rock, Fort Adams, and Fort Hamilton, so far as barracks for the men are concerned. Plans and estimates for new barracks at Fort Adams and at Fort Hamilton, to be adjacent to the battery stables, have recently been forwarded, and I hope may receive favorable consideration. It is difficult for commanding officers to bring their commands to a high degree of efficiency whilst they labor under so many disadvantages as to location for their men and the proper means of elementary instruction. I take the occasion to reiterate what I have heretofore said, that I do not think the light batteries are fulfilling a useful purpose as at present located. A light artillery school, under one of our best artillery field officers, where all, or at least four or five, of the light batteries could be concentrated, would, in my judgment, best fulfill the object of their organization. Scattered as they are at present, and associated with foot troops, and required often to perform kindred duties, the specialty of their arm is apt to be lost sight of.

Early in September I forwarded the reports of Lieut. Col. W. D. Whipple and Maj. H. C. Corbin, assistant adjutant-generals of the two departments of the division, as to the condition of the post schools, so that it seems but necessary to say here that, while post commanders have done their best to further education amongst the enlisted men, the progress has not been satisfactory. Suitable school teachers are scarce, and the men themselves generally take but little interest in the schools, looking upon them as so many calls for additional time and labor, and consequent reduction of the scanty hours of leisure.

The administration of post, company, and regimental funds at department headquarters is, I think, working satisfactorily. The close scrutiny maintained over all the expenditures prevents any use of the funds for purposes not contemplated by regulations or manifest propriety, and I advert to the subject here because I am aware that unjust aspersions are frequently made in the public press as to the use of the funds in question. At no time to my knowledge has there been more correctness in this respect than at present.

The annual rifle competitions of 1883 have recently terminated, and the results are conclusive that interest in this most essential part of military instruction has not diminished. The competitions of the Division of the Atlantic and the Department of the East took place at Creedmoor, L. I., with the sanction of the War Department, and those of the Department of the South, at Mount Vernon Barracks, Ala. The liberal allowance by the War Department for commutation of rations for the enlisted men competing for places and prizes has taken away even the appearance of unnecessary hardship, and has given general satisfaction. The competitions of this year were, I think, more promptly devised and executed than in previous years, and officers and men engaged in them have now all returned to their respective stations. Believing that it is well for purposes of discipline that the range where our annual competitions take place should be under control of the United States military authorities, it is my intention at some future time to select for the purpose named a post in the Department of the East where it is practicable to construct the necessary facilities in point of ranges and other essentials.

I inclose the several reports of the chiefs of the staff corps at these headquarters, and they will be found to exhibit in detail the operations of their respective departments during the past year. They have one and all given close attention to the requirements of their special branches, and those of them charged with the disbursement of public

funds have at all times held the necessity for an economical administration of them in prominent view. Indeed, the necessity for econmy under the limited appropriations is so great that it is difficult sometimes to discriminate as to where the funds should be supplied; this especially with reference to the quartermaster's department. The needs of all the posts are great, but with the great care exercised in the distribution of the funds each has received what is necessary for its most urgent purposes. It is seldom that valuable public property has to go to decay for want of the means to put it in order at the proper time. The reports of the inspectors, inclosed, evince a commendable degree of discipline and instruction at the several garrisoned posts. I have been gratified of late to see the efforts made to improve the clothing of our soldiers, and to place new recruits at less disadvantage on that score than in the past. I ask attention to the recommendation of the inspector of the Department of the East that sheets be issued to troops in barracks. They now have the pillowslip and the bedsack, and the addition of an inexpensive sheet of suitable material would be no more than what is demanded by the requirements of modern civilization for soldier as well as citizen. Any step tending to make the enlisted man a self-respecting individual, so long as it is in the line of military propriety and discipline, will ultimately prove of benefit to the service in general and to the tone of the ranks of the Army in particular. The report of the chief quartermaster of the department exhibits in detail all that has been done during the past year in the matter of repairs, construction, contracts, &c. Recently, under the immediate supervision of the chief quartermaster, the public buildings of the military reservation at Fort Sullivan, Eastport, Me., have by direction of the War Department been sold at public auction, and the reservation has been abandoned for military purposes. For many years past Fort Sullivan has not been deemed essential for the defense of the Atlantic seaboard, and its retention seemed no longer necessary. The project of establishing a garison at Fort Montgomery, Rouse's Point, N. Y., a strategic point of importance, still remains in abeyance until suitable barracks are provided, but I trust it may not be long before the views heretofore expressed in this matter can be put into execution.

The medical director reports the health of the command satisfactory. He has personally inspected the medical departments at all the posts in the Department of the East during the past year, and is able to report a satisfactory condition of affairs thereat.

The reports of the chief commissary of subsistence and of the chief paymaster are satisfactory as to their departments.

The report of the judge advocate of the division is an interesting document, and exhibits in detail the administration of military justice during the year. The statistics of crime do not exhibit any increase in the number of military offenders as compared with the strength of the command, but they cannot be held to be entirely satisfactory.

I trust that in the several reports which have been recently submitted to the Headquarters of the Army, in regard to the crime of desertion may be found sufficient material to form the basis of remedial measures of a permanent nature. The soldier, like his civil brother, wants something to look forward to in his old age, when length of service has diminished his activity and usefulness. It is needless to enlarge upon what his prospects are now; those in authority are fully able to judge from the data in their possession what they ought to be. For the faithful soldier the future should be made full of promise whose fulfillment is guaranteed by the word of law.

I ask attention to the suggestion in the judge advocate's report as to the propriety of legislation giving the corps of judge advocates a reasonable promotion in rank and pay for length of service in the corps. At present they all hold the rank of major, the only prospect of promotion being the remote one that some day one of their number may attain the position of judge-advocate-general. I find that the majority of them have held their present rank, in the corps for nearly seventeen years, and this fact alone is a powerful plea in their behalf.

It has happened in this division during the past year that a colone was in command of the Department of the South, but under the seventy-second article of war had no power to convene general courts-martial for the trial of offenses committed by the troops of his command. I am of opinion, therefore, that no harm to the service would accrue should the seventy-second article of war be reframed so as to provide that any officer, whatever his rank, assigned by the proper authority to the command of a military geographical department, shall be competent to appoint general courts-martial within his department.

By what seems to have been an oversight in the last appropriation bill for the support of the Army for the current fiscal year, the general-service clerks at division and department headquarters have been deprived of their extra-duty pay, an important item to them when the scale of their allowances is considered. I express the hope in their behalf that the omission to provide the extra-duty pay, authorized since the class was established in 1868, may be supplied at the earliest moment practicable.

In conclusion, I deem it proper to say that the officers of my staff, personal and general, have performed their duties with intelligence and fidelity during the year, and have rendered valuable assistance in the conduct of affairs within the division.

Pursuant to instructions, this report and all of its written inclosures are submitted in duplicate—a printed tabular statement of "movements of troops" in triplicate.

I am, sir, very respectfully, your obedient servant,

WINF'D S. HANCOCK,
Major-General, Commanding.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

True copy.

WM. D. WHIPPLE,
Acting Adjutant-General.

List of inclosures to annual report.

1. Report of inspector-general of divison.
2. Report of inspector-general Department of the East.
3. Report of judge-advocate of division.
4. Report of chief quartermaster of division.
5. Report of chief commissary of subsistence of division.
6. Report of medical director of division.
7. Report of chief paymaster of division.
8. Report of Col. Henry J. Hunt, as commander of the Department of the South, up to date of his retirement, September 14, 1883, with the subsidiary inclosures, all in duplicate.
9. Reports of inspections by Col. H. J. Hunt, Fifth Artillery, of posts in Department of the South during 1883.
10. Tabular statement of movements of troops, printed, in triplicate.

4 A.—REPORT OF BREVET MAJOR-GENERAL HUNT.

HEADQUARTERS DEPARTMENT OF THE SOUTH,
Newport Barracks, Ky., September 14, 1883.

SIR: I have the honor to submit the annual report of this department for the year commencing October 1, 1882.

The movements of troops during the year have been as follows:

The garrison of Fort Barrancas (Batteries B, E, and K, Third Artillery), which at the date of my last report were in camp at Mount Vernon Barracks, Ala., returned to their post December 11 (Department Special Orders, No. 117, of 1882). They were retained at Mount Vernon until all danger of yellow fever had disappeared at Barrancas. The detachment of marines from Warrington navy-yard under the command of Captain Bishop, which accompanied them from Barrancas, returned with them. In compliance with the instructions to abandon Fort Brooke, as mentioned in my last report, Battery I, Third Artillery, one of the two batteries constituting the garrison of Key West Barracks, and then in sanitary camp at Fort Brooke, was transferred (Department Special Orders, No. 118, of 1882) to Mount Vernon Barracks, at which post it took station December 23. The delay in moving this garrison was occasioned by the dengue fever which had been raging amongst its men. It was deemed unsafe to send them to other and healthier posts until the disease had entirely disappeared and the clothing and other material were entirely disinfected. Battery L (Hess's), although belonging to Key West, was moved to Mount Vernon for the winter, for the benefit of the climate on the debilitated system of the men.

On December 20, Lancaster's Battery F, Third Artillery, left Saint Francis Barracks, Saint Augustine, for San Antonio, Tex., in obedience to previous instructions from the War Department, where it was converted into a mounted battery (Department Special Orders 120, of 1882). In obedience to the same Special Orders, Battery G, Third Artillery (Barstow's), left Fort Brooke December 21 for Saint Augustine, to replace Lancaster's battery in the garrison of Saint Francis Barracks.

Fort Brooke was discontinued as a military post from that date, Ordnance Sergeant McMahon remaining in charge of the place until relieved by a citizen employé, when he proceeded to Key West Barracks and took charge of the public property there.

The public property at Fort Brooke was removed to other posts, the buildings sold, the bodies in the post graveyard exhumed and removed to the national cemetery at Barrancas, and the reservation transferred to the Department of the Interior.

In June of the present year the garrison of Fort Barrancas, Batteries B, E, and K, Third Artillery, Captain Tiernon commanding, in anticipation of another epidemic of yellow fever, was ordered into camp near Atlanta, Ga. (Department Special Orders 60, current series), leaving a small detachment with Lieutenant Humphreys, Third Artillery, in charge of the post, and of the repairs already ordered. This precautionary measure proved to be a fortunate one, as late in August the disease broke out at the Warrington navy-yard, when the detachment was removed by Lieutenant Humphreys to Fort Pickens. The public property and buildings were left in charge of the ordnance-sergeant and Captain Russell, of the Government schooner Matchless, and two hired watchmen. The garrison of Fort Barrancas established Camp Mitchell, so named in honor of the late Maj. Wm. G. Mitchell, Assistant Adju-

tant-General, on the 26th of June, near Atlanta, Ga., to remain there until it is safe to return to Fort Barrancas.

Timely notice was given to the commanding officer of Jackson Barracks, La., to prepare to remove promptly to Camp Mitchell should yellow fever appear at New Orleans, and should reasonable cause appear to demand the movement to report promptly by telegraph. So far no necessity for moving has appeared, and it is hoped that as the season is so far advanced that none will arise.

The inspection of the posts in this department which I proposed to make in the fall of 1882, was delayed by various causes (notably the heavy floods which prevailed in the Ohio River and submerged this post) until March of this year. I visited and minutely inspected all the posts except Little Rock Barracks, Ark., between March 13 and May 1, and the post at Little Rock in the latter part of July. Detailed reports of these inspections, showing the condition and needs of each, were forwarded to the Inspector-General of the Army, through division and higher headquarters August 14, with notes showing how far these needs had been supplied, repairs effected, and measures taken in consequence. With this report I also forward the reports of inspection made by the various post commanders on September 1, instant. They give in sufficient detail the condition of the posts to date, to which, when necessary, I have added my own views on special subjects. I would respectfully refer to these reports for more detailed information than can be given here.

I found the troops in good discipline; their wants in general have been well supplied, and as to food, as well as the ration permits. Where gardens could be cultivated, few or no complaints on this head were made. At other posts there was complaint, especially where the men had to work hard. I would urgently recommend an increase of the ration, especially of flour and the vegetable portion, beans and rice. I also recommend that cheese be added to the food ration. To the food of the soldier I gave, as a company commander, special attention for many years, always personally supervising the cooking and the expenditure of the company fund so as to prevent waste in any direction, and I am thoroughly convinced that when not supplemented by gardens, or from some other source, the Army ration is insufficient, especially so for men on the march or subjected to hard work or to more than the minimum duties of a peace garrison; even then it is scant. I have recently forwarded a report as to the causes of discontent and consequent desertion, in which I have given my views on the subject at length, and which has doubtless fallen under the observation of the general commanding the division.

Military instruction has been carried as far as was practicable in infantry and field-gun drill. In infantry target practice the improvement over that of last year is marked and gratifying, and I invite special attention to the report of Lieutenant Dudley, Second Artillery, in charge of it. All the garrisons are composed of artillery troops. The means of practical instruction in that arm have not been such as to admit of progress, nor can any such be expected until our forts and their armaments are in better condition. In the one field battery in this department only elementary instruction and platoon-drill, so called, have been practicable. There are not men enough in it to get out the whole battery, and as the supply of horses is complete, the labor of the few men is very heavy—rendered more so by the want of proper stables, gun-sheds, and shops. The post at which it is stationed, Little Rock Barracks, requires so large an expenditure to put it in proper order that the funds

assigned to this department will not suffice; estimates, with a view to a special appropriation by Congress, have been prepared and forwarded. The battery is in as good condition as circumstances will permit, but it needs more men to make it efficient as a school of instruction.

The duties of the staff departments have been satisfactorily performed, and all the wants of the posts well supplied and provided for so far as the means placed at the disposal of their commanders would permit. The troops have been regularly and promptly paid, subsisted, and clothed. There has been during the year a satisfactory improvement in discipline, as evidenced by the reduced number of trials by courts-martial, general and garrison, the former from 31 to 17 cases, the latter from 362 to 271 cases, with practically equal average strength of the command, and also in the health of the troops, especially at Little Rock Barracks, where it is due to improvements in drainage, and a consequent supply of better water. The inspections of posts, national cemeteries, property, and accounts, have, in the absence of a department inspector, been performed by myself and special inspectors, appointed from time to time. They have been made promptly and regularly, and the reports have been forwarded. For more detailed information, I would refer to the reports themselves, and as to supplies, &c., to those of the chiefs of the various staff and administrative departments, submitted herewith. The report on post-schools has already been forwarded by Brevet Lieutenant-Colonel Corbin, assistant adjutant-general of the department.

The reservation of Fort Brooke has been transferred to the Department of the Interior. Oglethorpe Barracks, Savannah, Ga., with the public land on which they stand have been advertised for sale. The application for a grant of the right of way for a railroad across the public grounds at Baton Rouge, La., has been favorably recommended. The barracks and buildings at that station have been unoccupied by troops for a long period, and must deteriorate or cause a considerable outlay to place and keep them in habitable order. It is doubtful, considering the small number of troops available for this department, if they will be reoccupied, and the question arises whether it is worth while to retain the public property there for further military purposes. There is a number of lots of public land in Saint Augustine not used or useful for military purposes, whilst other lots belonging to private individuals are included within the bounds of the military reservation proper, the continuity of which should be secured, both for building sites and to make the Government gounds fully available. A range for target practice cannot be obtained without firing over private lands. In this case it is very desirable that such exchanges should be made or such sales and purchases effected as will make the reservation compact and complete, so that the needed buildings may be properly located and erected and full control over all the post grounds secured.

At this post, Newport Barracks, Ky., an additional building for quarters is required to replace one recently removed. Estimates for its construction have been forwarded. Should the expressed wish of the General of the Army, that there should be, as there ought to be, at least two full companies at this post besides the department headquarters, more land must be acquired; it is impossible to find room for another battery or company within the post limits. I have already reported on this subject, and also suggested, in view of the danger of floods on the present site, whether a new site, sufficient for a regiment and the headquarters in addition, should not be selected and purchased. A large reservation in the immediate vicinity of Atlanta, sufficient for a post

in the center, with camping grounds for the garrisons of the Gulf posts exposed to yellow fever, I recommended three years ago or more to be purchased in lieu of the site of McPherson Barracks. It could then have been purchased at no higher cost, if as high, as was proposed to be paid for the latter. The establishment of Camp Mitchell at that place indicates that that is the best, as it is the most central position that can be selected. It is worth considering if it would not be good policy to dispose of the various isolated reservations in this department, for which there seems to be no further military use, including, perhaps, that of Mount Vernon, and with the proceeds establish such a post and reservation near Atlanta, or some other central point. This place affords another proper site for a large post, say a regiment, as it is in a central position and accessible to all points of the country and affording facilities for cheap supplies of every description.

I am, sir, very respectfully, your obedient servant,

HENRY I. HUNT,
Colonel Fifth Artillery, Commanding.

ASSISTANT ADJUTANT-GENERAL,
Headquarters Military Division of the Atlantic,
Governor's Island, New York Harbor.

Official.

H. C. CORBIN,
Assistant Adjutant-General.

5.—REPORT OF MAJOR-GENERAL SCHOFIELD.

HEADQUARTERS MILITARY DIVISION OF THE PACIFIC,
Presidio of San Francisco, Cal., October 3, 1883.

SIR: I have the honor to submit the following report of operations in this military division during the last year:

The Military Division of the Pacific comprises the Department of Arizona, commanded by Brig. Gen. George Crook; the Department of the Columbia, commanded by Brig. Gen. Nelson A. Miles (now temporarily by Col. Frank Wheaton, Second Infantry), and the Department of California, under my immediate command. The territorial limits of the three departments remain the same as at the date of the last annual report, except that the southern portion of the State of California, which formerly belonged to the Department of Arizona, was transferred to the Department of California by an order of the War Department, dated February 14, 1883. This change resulted naturally from the discontinuance of the depot and post at Yuma, no longer needed since the troops in Arizona are supplied directly by railroad.

The accompanying reports of Generals Crook and Wheaton give full account of operations in their respective departments. The able and exhaustive report of General Crook upon the difficult Apache question throws valuable light upon that subject. I need only add my commendation of the manner in which the commanders of those departments have discharged their important duties.

For the details of movements of troops and of official business transacted in the Department of California, I beg leave to refer to the accompanying reports of the chief staff officers on duty at these headquarters, viz:

Col. J. C. Kelton, assistant adjutant-general.

Maj. J. C. Breckinridge, assistant inspector-general.
Maj. Wm. Winthrop, judge-advocate.
Col. Rufus Saxton, assistant quartermaster-general, chief quartermaster.
Maj. George H. Weeks, quartermaster, chief quartermaster.
Maj. M. R. Morgan, commissary of subsistence, chief commissary of subsistence.
Col. Charles Sutherland, surgeon, medical director.
Col. George L. Febiger, assistant paymaster-general, chief paymaster of the division.
Maj. Charles J. Sprague, paymaster, chief paymaster, department of California.
Maj. Wm. A. Jones, corps of engineers, engineer officer.

Happily there has been in this department during the last year no disturbance of the peace calling for interposition of troops.

Under instructions from the Interior and War Departments, officers have been detailed to make surveys of the Klamath Indian Reservation in California, and the Duck Valley Indian Reservation in Nevada and Idaho. The proposed allotment of lands in severalty to the Klamath Indians and the sale for their benefit of the residue of their reservation, will, it is believed, prove beneficial both to the Indians and to the citizens of California who are developing the resources of that part of the State. But it is an essential condition to the success of this measure that the lands allotted to the Indians be made inalienable for a long term of years.

The question which was submitted by my predecessor in his last annual report, and which has since been the subject of correspondence with the War and Interior Departments, respecting the Piute Indians who had been placed upon the Yakama Reservation in Washington Territory, has not yet been finally disposed of. A considerable number of these Indians have quitted the Yakama Reservation and have made their way back to their old homes, near Warner Valley, Oregon. The question, what disposition should be made of them, has been fully submitted, and I only await the necessary orders of the War Department and the favorable season of the year to take the action decided on. This may be done, it is believed, without resulting in hostilities. It is a question of cost, and of the future contentment and well-being of the Indians.

The subject of desertion from the Army continues to merit the most thoughtful consideration. In this connection, the recent decision of the circuit court of the United States, in San Francisco, referred to by Major Winthrop in his report, is deemed important. This decision fully sustains the military jurisdiction in all cases of desertion. It also sustains, inferentially, the validity of the claim of the United States to the services of the soldier for the full term of his enlistment, however long he may have been absent without leave, and his liability to trial and punishment for such unauthorized absence during the two years not barred by the statute of limitations. This decision seems to enable the military courts to impose the penalties required by the necessities of the military service, while acting in entire accord with the judicial interpretation of the law.

The causes of desertion are numerous, and some of them, perhaps, beyond the reach of any practicable remedy. But the measures recently adopted to ascertain, as far as possible, the actual cause of desertion in every case, should lead to the appropriate remedy wherever such is possible.

Rifle practice has reached a very gratifying degree of excellence among a largely increased proportion of the troops. For the most skillful marksmen at long ranges the capacity of the present service rifle and ammunition has been exhausted. With them it is no longer a contest mainly of *skill* but one of *chance* in the use of an imperfect rifle and variable ammunition. I respectfully recommend Colonel Kelton's suggestions on this subject to the most favorable consideration.

The condition of the troops of this division in respect to discipline and instruction is all that could be expected of small and widely dispersed detachments. To improve their discipline, perfect their instruction, and, above all, to greatly increase their effective strength for service in the field, they should be concentrated into as few and as large garrisons as possible. In the Department of California this may now be done without the sacrifice of any important interest. The large majority of the troops in the department should now be concentrated at the Presidio of San Francisco, which affords in an eminent degree all the necessary facilities for the economical support and complete instruction of troops of all arms. In this connection I invite special attention to the accompanying report of Major Jones, engineer officer whose recommendation is fully approved.

In conclusion, I take pleasure in expressing my entire satisfaction with the manner in which the staff officers of the military division and department have discharged their important duties.

I am, sir, very respectfully, your obedient servant,

J. M. SCHOFIELD,
Major-General, Commanding.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

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5 A.—REPORT OF BRIGADIER-GENERAL CROOK.

HEADQUARTERS DEPARTMENT OF ARIZONA,
Whipple Barracks, Prescott, September 27, 1883.

SIR: In compliance with orders from Headquarters of the Army, I assumed command of this department September 4, 1882.

Appreciating the necessity for personally examining into the condition of the Apaches I left my headquarters on the 11th of September and proceeded to the reservation; I had conferences with both those who were openly in hostility, and those who had not yet broken from the reservation.

When I first met the Indians I found them sullen and distrustful, and it was with much difficulty that I got them to talk, but after breaking down their suspicions they conversed freely with me.

I had councils with them in the Mogollon, near Fort Apache, in the Cañon of Black River, in the Natanes Mountains, and at the San Carlos Agency—records of which were forwarded; I had also numberless private interviews with individual Indians, representative men of the different bands, in which they expressed themselves without reserve.

It should be remembered that in council, when statements are to be put on paper, Indians are much more guarded, timid, and apprehensive than when talking privately.

I discovered immediately that a general feeling of distrust of our people existed among all the bands of the Apaches.

They told me that so contradictory were the utterances of the different officers of the Government, that they had lost confidence in everybody, and did not know whom or what to believe; that they were constantly told, by irresponsible parties, that they were to be disarmed, that they were to be attacked by troops on the reservation, and removed from their country; and that they were fast arriving at the conclusion that it would be more manly to die fighting than to be thus destroyed.

The simple story of their wrongs, as told by various representatives of their bands, under circumstances which convinced me they were speaking the truth, satisfied me that the Apaches had not only the best of reasons for complaining, but had displayed remarkable forbearance in remaining at peace.

They had been openly plundered of the supplies provided for them by the Government, and they spoke with bitterness of nearly every one of their agents.

Being personally acquainted with almost all of the Apaches, I was fortunate enough to make them see that the war to the death, which they admitted having in contemplation, would no doubt cost our Government many lives and much money for its suppression, but for all that, it would finally result in wiping off the face of the earth the whole Apache race.

A comparatively few years ago, when these Indians were in the ascendency in this country, I could not have convinced them of our strength; certain tribes have upon several occasions made war upon us, thinking if they could destroy the whites in their country, that would be the end of us, but now, since they have come to realize our strength, the constant thought of many of them is how to protect themselves against absolute annihilation.

Having by my manner and intercourse with them regained the confidence which these Indians certainly had in me ten years ago, I took measures to insure peace and good conduct on the part of the different bands which were still on the reservation; I explained to them that there was a large element in Arizona which was constantly accusing them of crimes and disorders, that this class of men desired nothing so much as to drive them into war, in order to get their reservation away from them; that to protect them, I must be able to know myself, and to prove to others, that they were not guilty as charged, and to this end should reestablish the police regulations which I inaugurated ten years before; that I must know everything that occurred on the reservation, and where every Indian was all the time.

I therefore directed that every male Indian able to bear arms should constantly wear a metal tag inscribed with his number and the letter indicating his band; that an accurate census should be taken, that every male Indian should be enrolled, and a complete description corresponding with his tag entered thereon, and that frequent roll-calls should be had when necessary.

I discharged the scouts as their terms of service expired, enlisted others, reorganized the companies, and placed them under charge of Capt. Emmet Crawford, Third Cavalry, and Lieut. Charles B. Gatewood, Sixth Cavalry, with orders to report directly to me. The scouts, when not needed for active service, were to be scattered among the bands to which they belonged, and were required to keep their officers constantly informed with reference to the feelings and actions of the Indians of their respective bands.

So complete has been the success of this system that I am confident it would be impossible for an Indian to leave the reservation or to com-

mit any outrage or depredation without my being informed of the fact very soon afterwards.

At the same time I issued a general order, giving special directions with reference to the management of the Indians, and I republished, for the information and guidance of my command, General Orders No. 13, of 1873. (Copies are attached to and make a part of this report. Appendixes A and B.)

In these various measures it is but just to state that I had the hearty co-operation of Agent Wilcox.

I tender to Hon. J. A. Zabriskie, United States district attorney, and Hon. Z. L. Tidball, United States marshal for Arizona, my thanks for the valuable assistance rendered me, and without which my work would have been much more difficult.

The Chiricahuas were the only band of the Apaches I was unable to meet; they had not returned from Mexico, to depredate on our side of the border, since leaving the White Mountain Reservation, in the spring of 1882, but from information which I gathered on the reservation I became fully convinced that their return was merely a question of time, and so expressed myself in a letter to the division commander.

Being determined to leave nothing undone that would have a tendency to insure peace and tranquillity to the border, I left San Carlos the early part of October last, taking with me two staff officers, an interpreter, and half a dozen Apaches, and went to the extreme southeastern corner of Arizona, hoping from that point to open up communications with the Chiricahuas, or at least to learn the drift of their intentions. In this plan I was not successful, owing to various causes beyond my control. I was, however, strengthened in the opinion I had already formed, that Chiricahua depredations might be looked for at any time.

To be prepared, so far as was possible, for such raids, I hurried forward the reorganization of the pack trains of the department, which I had begun immediately upon assuming command, broke up the small stations at Hentig, Morenci, York's Ranch, and Camp Price, and ordered the garrisons to more central points, where they would be more immediately available for instant service.

I ordered Captain Crawford, Third Cavalry, with a body of Apache scouts, to take station in the vicinity of Cloverdale, N. Mex., and thence patrol the boundary westward. Captain Crawford's spies penetrated into Mexico, below Casas Grandes, Chihuahua, without finding a trace of the renegades, who had abandoned their former haunts and retired deeper into the Sierra Madres.

Having returned to San Carlos, on the 2d of November I again called together all representative men of the different bands and explained to them my views and intentions with reference to them. (See memorandum of council, Appendix C.)

From the date of my arrival in this Territory until the latter part of March there was not a single outrage or depredation committed on Arizona soil, either by reservation Indians or renegades.

Some time early in March a body of Chiricahuas left their stronghold in the Sierra Madre, and dividing, one party, under Jeronimo, numbering about fifty, raided into Sonora, for the purpose of getting stock; the other party, under Chato, were to raid into Arizona for the especial purpose of obtaining ammunition.

Chato's party, twenty-six in number, crossed the boundary, near the Huachuca Mountains, on the 21st of March and struck a charcoal camp 12 miles southwest of Fort Huachuca, at sunset of the same evening killing four white men, with the loss of one of their number, whose body was found on the field.

The raiders the next afternoon killed three men near the Total Wreck Mine, situated in the foot-hills on the west side of the Whetstone Mountains, in the vicinity of Empire Ranch, and the same night crossed the San Pedro River and the Southern Pacific Railroad, near Benson.

On the 23d two men were killed at Point of Mountain, near the south end of the Galiuro Range. From this point the route of the raiders is uncertain, they having scattered in small parties.

Their trails led across the Pinaleno Range, the northern extension of the Chiricahuas, into the San Simon Valley, and thence, by way of the Peloncillo Mountains, to the Gila Valley, near Ash Springs, and crossed into New Mexico not later than March 27.

On the morning of March 28 Judge McComas and wife were killed, on the stage road between Silver City and Lordsburg.

Chatos' party were in Arizona not longer than six days, and during this time traveled nearly 400 miles.

So far as I have any authentic information, nine white men were killed by them in this Territory, and probably two others near York's Ranch, on the Gila.

Such was the rapidity of their march, that not only was effective pursuit impossible, but the Indians were unsuccessful in the object of their raid, and left Arizona with very little more ammunition than they had when they crossed the boundary.

On the 27th of March one of their number, Pe-nal-tishn, deserted in the mountains east of Pueblo Viejo, and made his way to San Carlos Agency, where he was arrested, on the night of March 31, by Lieut. Britton Davis, Third Cavalry. This Indian acted as our guide in our trip to the Sierra Madre.

Troops started at once in pursuit as soon as the presence of this raiding party was known, but appreciating the difficulties which would probably prevent successful pursuit I put troops in position, hoping to intercept them on their return to Mexico.

Telegraphic instructions were sent to commanding officer at Fort Bowie to send parties to thoroughly scout the Chiricahua Mountains and to watch the San Simon and Sulphur Springs Valley; from Thomas two companies were ordered to Nogales; from Grant two companies were sent to White River; Lieutenant Gatewood's scouts were directed to Huachuca. The commanding officer at Fort Huachuca was directed to keep the country between Dragoon and Huachuca Mountains constantly scouted; Captain Crawford at Cloverdale was notified of these dispositions, and directed to put his scouts into position to intercept the raiders should they return by way of the Stein's Peak Range, or, if otherwise, to look out for their return through the Los Animas Plains; Lieutenant Davis at San Carlos was directed to take all possible precautions, in the event that the raiders attempted to come on the reservation; the commanding officer of Fort McDowell was ordered to move with all his cavalry to Willcox, and four troops of cavalry from Fort Apache were directed to the same point.

On the evening of the 31st of March, instructions from the General of the Army were received (copy attached, Appendix D) authorizing me to pursue the hostile Apaches, regardless of departmental or national lines; and having arranged for an interview with General Mackenzie at Albuquerque, I left my headquarters on the 2d of April for Willcox.

It may be proper to add here that in spite of the above dispositions, and the most energetic and vigilant action on the part of officers and men, such are the difficulties to be met in the pursuit of a raiding party through such a region as Southeastern Arizona, that not an Indian was

seen by any of the various parties at different times on their trail; nor were we able to intercept them on their return, their line of retreat being through the mountains to the eastward of the Los Animas Valley in New Mexico.

As soon as I arrived at Willcox, I began my preparations for operations against the renegade Indians.

In furtherance of my plans, I visited the states of Sonora and Chihuahua to meet and consult with the Mexican officials, civic and military, and arrange if possible for a harmonious understanding of the questions involved and for mutual co operation in movements against the hostiles.

The reception extended to me at all points was of the kindest and most hospitable character; and I desire here to express my appreciation for courteous and personal attentions from Generals Carbo and Topete and their staffs, and from Governor Torres and other prominent officials in Sonora; from Governor Samaniego, of the state of Chihuahua; from General Reguerra, in command of the Mexican troops in that state, and Mayor Zubrian and other gentlemen of the city of Chihuahua. These gentlemen received me most cordially, and gave assurance that they would in every possible way aid in the settlement of the pending Indian difficulties.

United States Consuls Willard at Guaymas and Scott at Chihuahua rendered me valuable assistance, for which I acknowledge my obligations.

The subsequent movement into the Sierra Madre and its results have been fully reported to the division commander. (See copy of my report attached, Appendix E.)

Upon my return from Mexico with the Chiricahua prisoners, the disposition of them became a matter of controversy between the Interior and War Departments. Pending the settlement of this question, I was ordered to Washington for consultation. After a full discussion of the various phases of the matter, an agreement was made between the two Departments under which the entire police control of the White Mountain Reservation was vested in the War Department. (Copy of memorandum of agreement is attached, Appendix F.) In compliance with instructions from the Secretary of War, I issued a general order (copy attached, Appendix G) placing under charge of Captain Crawford, Third Cavalry, the police control of the reservation and the care and maintenance of all Indian prisoners.

These orders to Captain Crawford were in effect merely a reiteration of directions which I had found it necessary to issue the previous autumn, when a thorough examination of the status of the Indians on the White Mountain Reservation convinced me that the safety of the Territory and welfare of the Indians required that I should assume the police control of the reservation, and which I virtually did.

(I append notes of the conference with the Apaches at San Carlos, October 15, 1882—Appendix H.)

It appears proper at this point to state that, in all the conferences with the Apache Indians, one great ground for dissatisfaction among them was that they were huddled together around the agency, where many of their people were sick, and where many had already died from disease, and where, for lack of suitable ground for cultivation, they could not raise crops. They assured me, in terms which satisfied me of their honesty of purpose, that if they were allowed to choose lands for themselves in different parts of the reservation they would immediately go to work, plant and raise crops, and would soon become self-suitain-

ing. Their agent, Mr. Wilcox, told me in effect that their complaint was just, and that the orders of the Indian Department required him to keep the Indians at the agency, but if I would take the whole responsibility of settling the Indians on other locations within the reservation, he would make no objection. I accordingly allowed the different bands of Apaches to settle on lands of their own choice within the reservation limits, and gave careful instructions to Captain Crawford to supervise their movements and the allotment of planting grounds, to give them all possible advice and assistance, and to use his scouts in such manner as would be most advantageous in carrying out the end in view, that is, that these Indians should become as soon as possible self-sustaining.

The result of this action has perhaps been even greater than I anticipated. Large crops of barley have already been harvested and sold; the corn crop now maturing is by all odds the largest ever raised on the reservation, as are also the other grain and vegetable crops.

It appears that one hundred and seventy-nine families which were thus transferred from the pestilential regions about San Carlos have raised on their new locations on Cañon, Cibicu, and Carrizo Creeks, near Fort Apache, sufficient crops to sustain themselves.

Ther crops would have been larger, except for the difficulty in obtaining seed in suitable quantity in time for planting. This difficulty will be obviated in the future by the foresight of Captain Crawford, in providing a room for storing seed for the next year's crop.

(I attach Captain Crawford's report—Appendix I.)

There are certain points which arise at once in all dealings with the Indians, and one of the most difficult for them to understand is the distinction between the Government, that is, the supreme authority, and the individual or agent representing this authority. They recognize at once the power which is sufficient to control and punish or protect them, and respect the individual holding this power; but the abstract idea that this man merely represents the Government, and that his promises or actions or recommendations are liable to be disallowed by higher authority, they cannot understand. To explain—although I endeavored to impress upon the Chiricahuas that I could make them no promises on the part of the Government, and in fact did make none, it was impossible to make them understand that the Government might do otherwise than as I requested. They knew me and had confidence in my intentions, and further than this they neither understood nor cared. They were convinced that I had the power to carry out whatever I might undertake, and therefore wanted to make peace with our people.

Their understanding of the whole matter was that they would be permitted to go upon the White Mountain Reservation and live under the same conditions as the rest of the Indians, and that they would be protected so long as they behaved themselves. The course pursued with the Chiricahuas was the only one possible under the circumstances. Only a few years ago, when there were few interests to be looked after, except such as pertained to the Government, the personal prejudice of the individual was a large element in the settlement of Indian difficulties. It made little difference whether this personal feeling was right or wrong, so far as results were concerned. We then had a frontier, and in Indian wars few suffered except the troops engaged. Now all this has changed; we really have no frontier, and an immense amount of capital is invested, and cattle-raisers, prospectors, and farmers swarm where comparatively a few years ago the foot of white men never trod. The new interests now to be considered are legion, and all must be pro-

tected. Nor are the inhabitants of this Territory alone interested. People living in all parts of the United States are represented by numerous investments in the different industries, and all demand, with justice, that this Indian question shall be settled on such a basis as shall afford the greatest security to life and property.

In the settlement of this question, leaving out entirely the moral aspect, there are simply two methods: either the Indians must be exterminated, or they must be treated with justice. From my experience of late years I can state unhesitatingly that since the Indians have learned the strength and power of our people, in almost every Indian war which I have known anything about, the prime cause therefor has been either the failure of our Government to make good its pledges, or the wrongs perpetrated upon them by unscrupulous whites. This condition of affairs can no longer continue. The Indian has now sufficient knowledge of the needs of the country to force us to deal justly with him, and if he is not so dealt with he will go upon the war-path.

That Indians are often robbed of their rations and of the goods provided by Government for their subsistence and support, by rascally agents and other unscrupulous white men, is a fact within the knowledge of any one having relations with them

These are the men who are responsible for this unsettled state of affairs.

Public sentiment in frontier communities does not consider the malicious killing of an Indian, murder, nor the most unblushing plundering, theft; and a community which will hang a horse thief to the nearest tree will submit to the plundering of Indians, and to the entire ignoring of their rights, even when they know that this course will bring an outbreak with all its attendant horrors. In this way it happens that whole communities are made to suffer by the cupidity of a few persons. Individuals should not be too severely blamed for their quiescence under such circumstances, for though they know of the injustice practiced, they are as a rule powerless to prevent the wrong.

It is too often the case that border newspapers are the organs of the thieves, and disseminate all sorts of exaggerations and falsehoods about the Indians, which are copied in papers of high character and wide circulation, in other parts of the country, while the Indian's side of the case is rarely ever heard. In this way the people at large get false ideas with reference to the matter. Then when the outbreak does come public attention is turned to the Indians, their crimes and atrocities are alone condemned, while the persons whose injustice has driven them to this course escape scot-free and are the loudest in their denunciations. No one knows this fact better than the Indian, therefore he is excusable in seeing no justice in a Government which only punishes him, while it allows the white man to plunder him as he pleases.

I have no knowledge of a case on record where a white man has been convicted and punished for defrauding an Indian.

I am not an apologist for the Chiricahuas—they are bad Indians, probably the very worst on the continent. They have suffered least of any from the cupidity of white men, and are therefore less excusable for their deeds of outrage than any other band. They certainly deserve the most exemplary punishment. These Indians are all equally culpable, but any attempt to punish one or a half dozen of them for past crimes would unquestionably drive them upon the war-path. In the autumn of 1873 I had whipped all the other bands of Apaches into submission, and driven them on to reservations, and was prepared to take the same course with the Chiricahuas, under conditions that assured

success, but at the moment I was entering on the campaign I was stopped by a negotiation with their chief, Cochise. A so-called treaty was made, the terms of which I have never been able to find out; this much I do know, that the Chiricahuas were given a reservation on the confines of Mexico, and that the Indians understood that, in consideration of sparing this Territory, their raids into Mexico would not be interfered with by our Government. The Indian, though ignorant, is not innocent, and in all matters of this sort is excessively shrewd. No one knew better than he that the conditions of the so-called treaty, as understood by him, were entirely in his favor, and he was quick to take advantage of the wrong position in which the Government was placed. The results are too well known to need reiteration.

It is now too late to punish them for past atrocities, in which this transaction makes us equally guilty, without sacrificing the interests of the present.

There are perhaps less than one hundred and fifty Chiricahua warriors; to fight them now would be to endanger the life of every stock man and prospector within striking distance of their mountains, and would ruin many important interests in this Territory.

The invention of breech-loading guns and metallic cartridges has changed the entire nature of Indian warfare. The Indians are now no longer our inferiors in equipment; their weapons of even ten years ago have given place to breech-loading arms of the best makers. An Indian in his mode of warfare is more than the equal of the white man, and it would be practically impossible with white soldiers to subdue the Chiricahuas in their own haunts.

The country they inhabit is larger than New England, and the roughest on the continent, and though affording no food upon which soldiers can subsist, provides the Indian with everything necessary for sustaining his life indefinitely. The agave grows luxuriantly in all their mountains, and upon this plant alone the Indians can live. They have no property which they cannot carry with them in their most rapid marches, nor settled habitations of any kind, but roam about like coyotes, and their temporary resting places are chosen with all the experience gained by generations of warfare. The Indian knows every foot of his territory; can endure fatigue and fasting, and can live without food or water for periods that would kill the hardiest mountaineer. In fighting them we must of necessity be the pursuers, and unless surprised by sudden and unexpected attack, the advantages are all in their favor. It should be remembered that in Indian combats you rarely see an Indian; you see the puff of smoke and hear the whiz of his bullets, but the Indian is thoroughly hidden. The soldier, on the contrary, must expose himself, since he is the attacking party. In operating against them the only hope of success lies in his using their own methods, and their own people with a mixed command. The first great difficulty to be met is to locate them, and this must be done by Indian scouts; then we must move against them in such manner that the Indians may not discover our movement. The marches must be by stealth, and at night. Indian scouts must be kept sufficiently in advance of the troops to be able to discover the enemy without being seen themselves, and to this end they must be scattered in front and on the flanks. They must leave absolutely no trail, but must travel over rocks, and keep constantly under cover. The enemy discovered, runners are sent back to the command, which must make forced night marches, so as to attack by surprise; the scouts meantime if possible surround the hostile camp, and keeping constantly concealed should be able to give all possible infor-

mation with reference to the situation of the camp, number of Indians, and in fact everything which it is desirable the commanding officer should know. The Indian's eyes are as keen as the eagle's, and his natural instincts developed to the highest degree. The unusual movement of a bush, the falling of a rock, the glint of the sun from the weapons of the scouts, will immediately send them scudding like a bevy of frightened quail. The surprise over, the Indians who escape are secure; pursuit is impossible in a country where every rock may hide a fugitive enemy, from behind which, with the present improved weapons in his hands, he can kill at will without exposing himself. Nothing can then be done except to return to your base, wait until matters have quieted down, and then repeat the operation. The above shows the necessities in successful operations; a single condition absent, or a precaution neglected, and failure is certain. Your presence in their haunts known, the Indians send their families beyond reach of danger, and the bucks without *impedimenta*, swarm about your column, avoid or attack as their interests dictate, dispute every foot of your advance, harass your rear, and surround you on all sides. Under such conditions regular troops are as helpless as a whale attacked by a school of swordfish. The tendency of military drill and discipline is to make the individual soldier a machine, dependent upon the officer in command for its movement and action, and upon cohesion with its fellow machines for its efficiency. His individuality is completely lost in his organization, and he therefore cannot compete on equal terms with an enemy whose individuality under all circumstances is perfect.

With all the interests at stake we cannot afford to fight them; we are too culpable, as a nation, for the existing condition of affairs. It follows that we must satisfy them that hereafter they shall be treated with justice, and protected from the inroads of white men.

The reservation system offers at present the easiest way to this end. Settle the Indians on reservations, and teach them what they do not know of the methods of agriculture, stimulate them to industry by providing a market for their crops, supply them with such food as is necessary for their subsistence until they learn how to live in the new way, and to become self-supporting.

The reasoning power of the Indian from his own standpoint is unequaled. The wild Indian just brought on a reservation must understand that the person in charge of him is absolute, and that he has the power to enforce obedience to all his commands. He yields readily when he has confidence and respect for the individual exercising control, but without this it is an impossibility to satisfactorily manage him. He knows now how great is the power of the Government, and if treated with common justice, will become tractable, obedient, and easily managed, but he cannot be governed or protected by the same methods that have proved so successful in the management of the freedmen of the South. Unlike the negro, the Indian cannot speak our language, has never been domesticated among us, and is consequently ignorant of our manner of life. Therefore, Indians must be segregated until they learn the way of the whites and until mutual interests spring up between them.

Recently it has been the general wish of all the tribes among whom I have been to own their land in severalty. There is among them a constant feeling of insecurity; they have so often been legislated or tricked out of their reservations that they fear the same thing may again occur should their land be coveted by white settlers. As showing the strength of this desire to own his own land individually, I have been

reliably informed that Pedro, the chief of the White Mountain Apaches has tendered taxes on the land he occupies, thinking that in some way a tax receipt might give him some title in law.

Contrary to what may be the general impression, there is no people who has stronger affection for children than the Indians, and the thought that troubles the Indian most is what is to become of his family when he dies. The main reason for the tribal relation of Indians is that their families may be cared for and protected by the band to which they belong after they are dead. Give the Indian a patent for his land, under such conditions preventing alienation as may be deemed advisable, and let him feel that it is his own and cannot be taken from him. He then becomes not only conservative, for he has property to lose by misconduct, but, when he surrounds himself with pigs and cows, &c., he finds that he has all he wants to live upon. He then realizes that he is independent and that his family is provided for in the event of his death, and there is no further need of the tribal organization. It will then, in my judgment, disappear, and not until then.

So soon as the Indian gets his land in severalty he should have the ballot. Nothing can be of greater value in the settlement of the Indian question than a community of interests between the Indian and the white settler in his vicinity, and in no other way can this be so easily brought about as by making the Indian politically the white man's equal. He is certainly the equal mentally of a large class who now have the franchise, and with the right to vote he would soon find that the white communities living nearest him would take an interest in his concerns. No people or race can live in our country deprived of full political powers without becoming more and more degraded. Nor can such a people be long imposed upon or mistreated with the right to vote allowed them.

The disarming of Indians is very generally believed to be the first step in solving the Indian problem, and it is often insisted on as the one condition precedent to placing them on reservations. In my judgment this is an error. In the first place, it is impossible to disarm Indians. Individuals may be taken in certain instances at such disadvantage as to make it possible to get their arms, but with whole bands or tribes this is hardly possible. I knew that the Chiricahuas had an abundance of the best arms, and yet when they came into our camp, thinking very likely that I would demand the surrender of their arms, many of them were armed only with lances, and others with very indifferent guns, which would have been given up had I demanded them. The result would have been, they would have considered that we were afraid of them, their arms would have still been in their possession, and we would have lost their confidence, which can only be secured by showing them that at their best we have no fear of them, but are able under all circumstances to punish or control them. Neither is it possible to prevent Indians from obtaining arms and ammunitions; in this country money will buy anything. One strong incentive for Indians to go upon the war-path is to obtain munitions of war or the means to purchase them. As I have already stated, this was the main reason for Chato's raid into Arizona. There is another reason: the Indian knows better than any one else how necessary arms are for his protection. He has discovered that the Government does not prevent the disreputable class of white men with which he is surrounded from committing depredations upon his reservation, or punish them for their acts. He concludes that he must protect himself.

Deprive the Apache Indians of their arms, and in a short time there would not be a hoof of stock on the reservation.

During the excitement following the Indian raid last spring, threats were openly made, and an unauthorized organization was formed with the avowed purpose of attacking the San Carlos Indians. This company of "rangers," as they called themselves, while *en route* to San Carlos, passed within sight of my camp at Willcox. I informed the Indians on the reservation that if attacked they would be expected to defend themselves. The rangers marched nearly to San Carlos, did *not* attack the Indians, and then marched back again to Tombstone.

Had these Indians been unarmed, and the attack been made, the result would not only have been a foul disgrace to our Government, but a blot on humanity.

The location of reservations is another serious matter in the consideration of this question. Since the return of the Chiricahuas there has been a clamor from a portion of the press for the removal of the Apaches from this Territory. The glibness with which people generally speak of moving them would indicate that all we have to do is to take them from their camps, as you would chickens from a roost, without reflecting that to attempt their removal would bring on the bloodiest Indian war this country has ever experienced. Besides this, where shall they be located? No other State or Territory wants these Indians. The mere mention of it to the Apache Indians would create a feeling of insecurity among them which would tax to the utmost every means in our power to quiet.

I have several times within the past year found it my duty to call the attention of the Department to the condition of the Hualpai Indians. They have for ten years past been friendly, and are utterly without means of support. Their reservation is not suitable for cultivation except under conditions beyond their power to produce, and they are consequently compelled to live upon such spontaneous growth as their country affords, and upon a rapidly diminishing supply of game. These Indians are in a starving condition; during the past winter they have suffered severely from the ravages of small-pox. In their efforts to secure food there has been great danger of infecting the whole country with the dread disease. This danger, however, is happily now passed, as they have recently been vaccinated under directions of the Indian Department, but they are still in as great straits as ever for want of food. I urgently recommend that some permanent provision be made for them. In this connection I cannot refrain from calling your attention to the obvious injustice of feeding and caring for the powerful and semi-hostile tribes, while friendly and peaceable Indians like the Hualpais are allowed to actually starve for lack of the pittance necessary to sustain life.

Indians frequently remark on this policy, and say it is better for them to be on the war-path. In this way we are constantly offering inducements for them to misbehave, in order that their good will may afterwards be purchased by presents or supplies.

I append the reports of the chiefs of the staff departments, as follows: Acting assistant inspector-general, Maj. A. K. Arnold, Sixth Cavalry, chief quartermaster, Maj. A. J. McGonnigle; chief commissary, Capt. C. P. Eagan; Medical director, Maj. B. J. D. Irwin; chief paymaster, Maj. P. P. G. Hall, and First Lieut. G. J. Fiebeger, engineer officer, marked K, L, M, N, C, and P, respectively, and to which your attention is respectfully invited for information with reference to the administration and work of their departments.

The instruction of the command in all that tends to increase efficiency of the troops in accuracy of rifle firing has received careful attention, and I take pleasure in reporting that the increase in proficiency during the past year has been marked. Officers and men have taken increased interest in this matter, and the improvement which has followed is a source of gratification to me. There are, up to this date, one hundred and seventy-eight qualified marksmen in the department; last year the number qualifying was fifty-three, in which number were included nineteen marksmen belonging to companies of the Eighth and Twelfth Infantry, which organizations have since left the department.

I respectfully call attention to the remarks of the inspector-general of the department, with reference to the class of horses purchased for the cavalry service, in which in the main I concur. After a careful examination into this matter, I have come to the conclusion, 1st, that all horses and mules for the Army should be purchased in one locality, 2d, that all horses and mules should be inspected by the same persons. Kansas City, Mo., probably offers at present better facilities as a purchasing point than any other place in the United States. At all events the mere fact that a certain point has been selected at which animals are to be purchased would at once attract sellers for a market. Mr. William Chambers, now inspector of horses and mules for the Military Division of the Missouri, is in my judgment one of the best horse experts in the country, and rarely fails to detect blemishes or defects. Col. William B. Royall, Fourth Cavalry, as a judge of general aptitude for cavalry service, is without a superior in the Army. The horses and mules purchased should be sent to some depot contiguous, and from thence distributed to the Army as needed. I am confident that by the adoption of this plan, or a similar one, the class of animals furnished the Government would be improved, and the cost be materially lessened.

There are insufficient barracks and officers' quarters, at some of the posts in this command, notably at Forts Apache, Grant, and Huachuca.

All that was possible with the funds and material at hand during the last fiscal year was done to improve the condition of the different posts, and it is hoped that the judicious expenditure of funds available for the coming year will supply the posts in the department with sufficient barrack accommodations for their garrisons, with the exception of Apache and Grant, for which posts additional appropriations will be urgently needed.

I have the honor to be, very respectfully, your obedient servant,

GEORGE CROOK,
Brigadier-General, U. S. A., Commanding.

The ADJUTANT-GENERAL,
Military Division of the Pacific.

APPENDIX A.

[General Orders No. 43.]

HEADQUARTERS DEPARTMENT OF ARIZONA,
Whipple Barracks, Prescott, October 5, 1882.

The commanding general, after making a thorough and exhaustive examination among the Indians of the eastern and southern part of this Territory, regrets to say that he finds among them a general feeling of distrust, and want of confidence in the whites—especially the soldiery; and also that much dissatisfaction, dangerous to the peace of the country, exists among them.

Officers and soldiers serving in this department are reminded that one of the fundamental principles of the military character is, justice to all—Indians as well as white men—and that a disregard of this principle is likely to bring about hostilities, and cause the death of the very persons whom they are sent here to protect.

In all their dealings with the Indians officers must be careful not only to observe the strictest fidelity, but to make no promises not in their power to carry out; all grievances, arising within their jurisdiction, should be redressed, so that an accumulation of them may not cause an outbreak. Grievances, however petty, if permitted to accumulate, will be like embers that smoulder and eventually break into flame.

When officers are applied to for the employment of force against Indians they should thoroughly satisfy themselves of the necessity for the application, and of the legality of compliance therewith, in order that they may not, through the inexperience of others, or through their own hastiness, allow the troops under them to become the instruments of oppression.

There must be no division of responsibility in this matter; each officer will be held to a strict accountability that his actions have been fully authorized by law and justice, and that Indians evincing a desire to enter upon a career of peace shall have no cause for complaint through hasty or injudicious acts of the military.

By order of Brigadier-General Crook.

J. P. MARTIN,
Assistant Adjutant-General.

APPENDIX B.

[General Orders No. 44.]

The following orders are republished for the information and guidance of this command:

[General Orders No. 13.]

HEADQUARTERS DEPARTMENT OF ARIZONA,
Prescott, April 8, 1873.

The following memorandum of instructions is hereby published for the guidance of officers commanding troops stationed on the several Indian reservations in this department:

I. With a view to bringing the straggling bands and families still at large upon the reservations, and to serve as nucleus for the establishment of civil government, a small number of the Indians recently used as scouts will be retained in service under existing laws at each of the reservations hereafter specified.

Each of these detachments will be under the command of an officer, designated by the department commander, who will have charge, under the supervision of the commanding officer of the post, of their clothing and accounts; but the post commander may communicate with them direct, at any and all times.

These Indians will be selected from among the best of their several tribes, and will be liable to be mustered out for misconduct towards the Indians of their own or other tribes, or other good cause, and their places filled by others duly selected. They will constitute the police force of the reservations, and while required to attend regular musters and inspections, will not only be allowed, but will be required to cultivate the soil and perform the various industries prescribed by the Indian Department, the same as other Indians.

They will be used, from time to time, upon the application of the agent, or the commanding officer's own motion, to preserve the peace, report and correct any irregularities that may occur among their own or other tribes in the vicinity.

II. Commanding officers will aid the duly authorized agents in instructing the Indians in, and establishing among them civil government in its simplest form, enabling them to settle their differences according to the usages of civilization, gradually showing them its benefit as contrasted with their own barbarous forms and customs.

To do this effectually will require different forms to suit the peculiarities of different tribes, and the agents of the several reservations are requested to meet the officers commanding the military on their respective reservations and agree upon the necessary forms, being careful not to make them too complicated at first for the comprehension of the tribes to which they are to be applied, leaving them to be enlarged with their capabilities, so that when the auxiliary force can be dispensed with, they will be capable of self-government and eventually become good citizens.

While they should not be judged harshly for acts which in civil codes would constitute minor offences, care should also be taken that they do not succeed in deceiving their agents and the officers, in matters of great import, being careful to treat them as children in ignorance, not in innocence.

Perfect harmony between the officers of the Indian and War Departments, on duty together, is absolutely necessary in treating Indians so lately hostile and so apparently incorrigible, and the department commander earnestly enjoins this harmony, and directs that in case of difference in matters where the line is not plainly marked, that officers carefully avoid such difference being made known to the Indians, and that they refrain from any overt act in the matter at issue until instructions from these headquarters shall have been received.

By command of Brevet Major-General Crook.

A. H. NICKERSON,
Captain Twenty-third Infantry, A. D. C. and A. A. A. G.

By order of Brigadier-General Crook.

J. P. MARTIN,
Assistant Adjutant-General.

APPENDIX C.

Memorandum of a council at San Carlos, Ariz., November 2, 1882, between General Crook and the Indians on the White Mountain Reservation.

General Crook said:

I have now been among you two months studying your wants and condition. I am astonished to find how little progress any of you have made toward civilization and self-sustenance, while the majority of you are not as well off as you were when I left you eight years ago. As an examination into the cause of all this degeneracy cannot rectify the faults of the past, you must content yourselves with the determination that the future shall be better.

You are fortunate now in having a good agent, one who gives you all you are entitled to; but he may leave, and you get in his stead a man like his predecessor, of whom you complain so bitterly. In the future, these troops will not serve as a guard while you are being robbed and oppressed; but you must as much as possible protect your own rights.

Your agent has become satisfied that you cannot become self-sustaining while kept in this place. Therefore we have concluded to allow you to select within the limits of your reservation suitable localities where you can make your future homes. In thus allowing you to scatter, the head-men of the respective bands will be held responsible for the behavior of their people. In this you will be assisted by the enlistment of some of you as soldiers, who will reside habitually among their people. The enlistment of these men will be made with especial regard to their influence with their own people, character, and aptitude for learning the new duties expected of them, in order that they may then better assist in leading their people towards self-government. I intend to stop counting you now, because you have shown such a good disposition, have come in promptly, and I have confidence in your ability to control your own people.

When a band shows its inability to control itself, it will be brought in where we can do the controlling for it. If any of the bands become unmanageable, the other bands must join in and settle them, and as much as possible all must work in harmony for the common advancement. I will only bring in the white soldiers when I find you cannot be controlled by your own people. All reports of depredations must be examined into at once, so that the responsibility may fall where it belongs.

One of the conditions of your being allowed to go in this way is that you must support yourselves after your crops come in in the fall.

Such supplies as you get from the agent until that time you must pack out to your homes yourselves.

The chiefs will be held responsible that no tizwin is made.

When I was here before I tried to break up this tizwin business, and told you to put all your money in cattle and brood mares; you paid no attention to me, and let all your brains run down in your stomachs. You must keep your checks always about you, so that you can be recognized by anybody who may meet you.

You must put your money and surplus produce in stock.

Your future will depend almost entirely upon your own conduct. You must pay no attention to the counsels of ill-disposed persons; they are not your friends; they simply hope to make something out of you.

When you are in doubt about something and want advice, always come in to your agent and talk with him.

I have a good deal of confidence in you now, and I want to see by the end of the year which band shall be farthest advanced.

The survey of the reservation is now going on, and its boundaries will be well defined by next spring.

Within the bounds of this reservation there is none of the land which was formerly claimed by the Apache-Mojaves, or Apache-Yumas, and only a little of that formerly occupied by the Apache-Tontos. There is plenty of land on this reservation for everybody now here, and all the bands must be allowed to select suitable planting places upon it.

We are going to look out for the interest of everybody.

Captain Crawford, at this point, and Lieutenant Gatewood, at Apache, will give you all the details. You notice that everything said here has been put down on paper, so that we shan't have to depend upon memory.

I want you to remember all this, and not forget it.

A good many men say more than they mean, but you know that I mean at least as much as I say, and sometimes a great deal more.

I have nothing more to say; you will not have to come here to be counted any more.

Perhaps the agent here may have to say something to you.

Hereafter you will not have to have passes to go anywhere on the reservation, so long as there is no disturbance.

I have almost forgotten to say that, so long as the Chiricahuas are out, you cannot expect to have a secure peace; and I may have to call upon you yet to settle that matter.

Mr. Beaumont said:

The agent is absent for a few days; while he is gone I act for him and speak for him. What the general has promised for the agent the agent will do; all that you are entitled to from the agent you will get; all that is sent from Washington the agent will give you.

The agent will never promise you more than he is able to perform; he will do his duty by you, and you must do your duty by him.

While you are unable to sustain yourselves the agent will give you enough to live on; but so soon as you can begin to plant and raise crops you must do something to assist in your own support. The tools needed for planting, &c., will be furnished by the agent, and he will expect you to take good care of them, and use them.

The clothing and other annuity goods will be here in about a month; when they come they will all be distributed equally and fairly among all these Indians. The good Indians on this reservation will find that they have a good agent, but the *bad* ones will find that they have one as bad as they can be.

The agent will work in perfect harmony with General Crook.

APPENDIX D.

(Telegram.)

PRESIDIO OF SAN FRANCISCO,
March 31, 1883.

COMMANDING GENERAL,
Department of Arizona, Whipple Barracks, Ariz.:

SIR: Instructions just received from the General of the Army authorize you under existing order to destroy hostile Apaches, to pursue them regardless of department or national lines, and to proceed to such points as you deem advisable. He adds that General Mackenzie's forces will co-operate to fullest extent.

By order of General Schofield.

KELTON, *A. A. G.*

APPENDIX E.

HEADQUARTERS DEPARTMENT OF ARIZONA,
Whipple Barracks, Prescott, July 23, 1883.

SIR: I have the honor to report that upon assuming command of this department in September last I made a careful investigation of the Indian question, and the results of the inquiry were embodied in letters to the division commander.

I was convinced that the return of raiding parties of Chiricahuas might be looked for at any time, and to be prepared for such an irruption I made such disposition of my troops and scouts as would be most likely to prevent extended and general depredations.

On the 21st of March a small party of Chiricahuas under Chato crossed the frontier from Mexico and were first seen near Fort Huachuca, and from thence made a circuit

through the San Pedro and Gila Valleys, returning through New Mexico. Of this raid and its consequences full reports were transmitted at the time.

There was a slight hope that the raiding party might be intercepted on their return, and to this end Captain Crawford and the Apache scouts were ordered to take position from which they could ambuscade the route, should the raiders return by the way of the Stein Peak Range, a favorite trail in other years. Captain Rafferty, with two companies from Fort Bowie, was directed to San Bernardino; two companies from Fort Grant, under Captain Overton, were ordered to White River. The troops at Fort Huachuca were directed to keep the country between the Whetstone and Dragoon Mountains constantly patrolled. Captain Vroom, with two companies from Fort Thomas, was ordered to Nogales to scout in either direction. The Chiricahuas, however, made their way out through New Mexico, at a point eastward of Crawford's position.

To pursue a raiding party of Apaches in Southern Arizona, with any hope of overtaking or destroying them, is one of the most hopeless tasks that could be delegated to officers and soldiers. The Indians on such occasions travel without *impedimenta* of any kind, and move across the country at the rate of 75 miles a day, abandoning and killing their horses as fast as they play out, and helping themselves to remounts at every ranch they pass; while the troops must follow the trail with but one mount.

But while the hostiles were making a trail of blood through Arizona and New Mexico, they were unconsciously sowing the seed for their own destruction. One of their number, Pe-nal-tishn, deserted, made his way into the San Carlos Agency, was seized by Lieut. Britton Davis, Third Cavalry, and turned over to me at Willcox, where I had proceeded on the 2d of April.

After a severe examination, Pe-nal-tishn, generally called by his sobriquet "Peaches," agreed to conduct me to the stronghold of the hostiles in the Sierra Madres, on the boundary line between Sonora and Chihuahua. I concluded to trust him and accepted his services. Troops had meanwhile concentrated at Willcox, on the Southern Pacific Railroad, consisting of six companies of the Third and Sixth Regiments of Cavalry, under command of Maj. James Biddle, Sixth Cavalry, and Capt. Wm. E. Dougherty, First Infantry. Lieutenant Gatewood, Sixth Cavalry, was also ordered to hurry forward the enlistment and equipment of seventy additional Indian scouts, at San Carlos Agency, and then join the main command at Willcox.

While these matters were pending, I proceeded by railroad to Guaymas and Hermosillo, Sonoro, and to the city of Chihuahua, to meet and consult with the Mexican officials—civil and military—and arrange, if possible, for a harmonious understanding of the international questions involved, and mutual co-operation.

The reception extended me was of the most hospitable and cordial character; Generals Carbo and Topete, and their staff, in Sonora, and Governor Torres and other prominent functionaries in that State; and Governors Samaniego and Terrasses, of the State of Chihuahua, and Mayor Zubrian of the city of Chihuahua, and other gentlemen, received me most cordially and gave assurances that they would in every possible way aid in the subjugation of the Chiricahuas, who had for so many years murdered and plundered their people as well as our own. Consuls Willard at Guaymas and Scott at Chihuahua rendered me valuable assistance, for which I desire to express most grateful recognition.

To pass over minor details, I reached San Bernardino Springs, on the international boundary line, on the 29th of April, and made the following dispositions to guard the rear and flanks, and protect the settlers of Arizona from counter raids during our absence.

Maj. James Biddle was left with five companies of the Third and Sixth Cavalry at Silver Creek; Capt. G. E. Overton, Sixth Cavalry, with two companies of his regiment at old Camp Rucker; Capt. P. D. Vroom, Third Cavalry, with two companies at Calabasas. These troops, in conjunction with those to be moved by Captain Rafferty, Sixth Cavalry, from Fort Bowie, and Major Nolan, Third Cavalry, from Fort Huachuca, would keep the country well patrolled.

To insure unity of action, Col. E. A. Carr, Sixth Cavalry, was directed to assume general command of the force at any time such assumption might become necessary. Captain Dougherty, First Infantry, commanding officer at Fort Apache, was directed to return to his post and carry out certain instructions with reference to the control of the White Mountain Apaches and other agency Indians.

On the 1st of May I left San Bernardino Springs with the following force: 193 Apache scouts, commanded by Capt. Emmet Crawford, Third Cavalry, assisted by Lieutenants C. B. Gatewood, Sixth Cavalry, and J. O. Mackay, Third Cavalry, and Capt. A. R. Chaffee's company of the Sixth Cavalry (42 enlisted men and two officers, Lieutenants Frank West and W. W. Forsyth). Acting Assistant Surgeon George Andrews and Hospital Steward J. B. Sweeney were ordered to report to Captain Chaffee. My personal staff consisted of Captain Bourke, Third Cavalry, A. A. A. G., and Lieutenant Fiebeger, Corps of Engineers, A. A. D. C.

This force was the maximum which could be supplied by the use of every available

pack animal in the department, and the minimum with which I could hope to be successful in the undertaking upon which I had engaged. We had supplies, field rations, for sixty days, and one hundred and fifty rounds of ammunition to the man.

To reduce baggage, officers and men carried only such clothing and bedding as were absolutely necessary, and instead of keeping up their own messes, the officers shared the food of the packers.

Our pack-train was in excellent condition, and comprised over three hundred and fifty animals.

We moved southeast down the San Bernardino, the most northerly branch of the Yaqui, the largest river of Western Mexico. For three days we did not see a human being. The whole country had been laid waste by the Apaches, and much land of value and formerly cultivated had grown up into a jungle of cane and mesquite. We followed the trail which our guide "Peaches" assured me had been made by the hostile Chiricahuas. On the 6th of May we passed by the hamlets of Bavispe, San Miguel, and Basaraca, whose inhabitants welcomed us with exuberant joy. The authorities of Bavispe offered to come to our assistance with every man if needed, and also offered the services of four guides conversant with the foot-hills of the Sierra Madre. These offers I did not accept for want of transportation and supplies, and not believing that any guides could be equal to those whom we had been following.

The condition of these little Mexican communities was deplorable. Apache attacks were to be looked for at any moment. No man would venture away from the vicinity of his own hamlet. All the available force of the settlements was constantly on the alert watching for an enemy as cunning, as stealthy, and bloodthirsty as so many Bengal tigers.

By the 8th of May we had entered the Sierra Madre, making the movement at night to avoid detection. The signs of the presence of hostile Chiricahuas became abundant. There were abandoned camps of fifteen, twenty, thirty, and forty families; cattle, horses, and ponies, living and dead.

The country was the roughest imaginable, but well suited as a place of refuge for the Chiricahuas, who, unless taken by sudden surprise, could, from their points of vantage, withstand an army. We found at all times an abundance of the purest water and plenty of fuel, the mountains being covered with forests of pine and oak. We made our way cautiously, and with considerable difficulty, farther and farther into the recesses of the Sierra Madre, the trail becoming very precipitous. A number of mules were lost by slipping over precipices, but in each case the contents of their packs, when not too much damaged, were saved with much trouble.

On the 12th the guide "Peaches" conducted us to the stronghold of the enemy, a formidable place, impregnable to attack, had such been dreamed of. To be explicit, the whole Sierra Madre is a natural fortress, and to drive the Chiricahuas from which, by any other method than those we employed, would have cost hundreds of lives. The enemy was not to be found in this particular fortress. The nature of the Apache impels them to change their camps every few days, and thus avoid as much as possible anything like a surprise. Indeed, they never have anything like a permanent camp. Their temporary abodes are merely brush "wick-a-ups," which can be built in half an hour and destroyed in a few moments, so as to leave to the unpracticed eye hardly a trace of their presence.

The indications of the proximity of the enemy had now become so marked that I concluded to keep the pack-trains back in the stronghold, guarded by Chaffee's company, while the Apache scouts under Crawford should scour the country in front and on our flanks.

They moved out on foot, carrying three days' rations on their backs, which were to last four days, each man having one hundred rounds of ammunition.

On the 15th of May the scouts discovered the camps of the Indians, which were afterwards found to be those of Chato and Bonito. In accordance with my careful instructions they would have been surrounded, but for the fact that some of the scouts incautiously fired upon a buck and squaw. The surprise was complete, and in the subsequent fight, which lasted several hours, the Indians were thoroughly beaten, the camps and their contents captured, and five half-grown girls and young boys taken prisoners. Nine dead Indians were found afterwards that had been killed in the fight, the extremely rugged nature of the country—the camp being situated half way up the face of a precipitous mountain, gashed with ravines and arroyos—preventing any exact count being made without extreme danger from the Indians who might be wounded or hidden in the rocks, and who could have killed at their will without exposing themselves. There was considerable property stolen from Americans and Mexicans found in the camp, and about forty horses and mules.

Chato, it will be remembered, was the chief of the party which had recently raided so successfully through Arizona and New Mexico. From the captives much information was extracted. They said that only a few days before two messengers had been sent to San Carlos to learn if they could return to the agency. They were not badly

off for food, having all the beeves, ponies, and donkeys they could eat. The eldest of the captive girls said that if permitted she would go out to her people and have a delegation of them come in next day, as she was sure they wanted to make peace. Her manner satisfied me of her sincerity, and I allowed her to leave the camp.

After surprising and destroying Chato's camp, the situation presented certain very serious complications.

The Indians were so thoroughly alarmed that to attempt further pursuit would be fruitless. We could never hope to catch them in the rugged peaks, and the effort would surely cost the lives of many men, each rock being a fortress from behind which the Chiricahuas could fight to the death with their breech-loading guns. Two alternatives seemed presented: we must either return, let the excitement quiet down, and then, if permitted, steal back again and take the chances of another surprise, during which period the Chiricahuas would be continuing their depredations in Mexico and our own country; or, we must accept their surrender.

To continue the narrative: The next day (May 17) the Chiricahuas made a signal smoke, and six squaws came in.

With these I declined to talk, telling them that their representative men must come in if they desired to discuss the situation with me. Early on the 18th Chihuahua entered my camp. He is not a chief, but is one of the most prominent men of his tribe, noted for intelligence and bravery. He said that the country to which we had penetrated was looked upon as impregnable; that the Mexican troops had never succeeded in getting into it, but had always been met and driven back with rocks as well as bullets, as soon as they had passed the foot-hills. He explained that the sense of security was so great that a large number of the men were then absent on raids in Sonora and Chihuahua. He told me where the different chiefs were raiding. He spoke bitterly of the Mexicans, but said the Chiricahuas would be glad to make peace; that a large element in the band was getting tired of constant war, and would gladly settle down if allowed to do so. The reason given for their hatred of the Mexicans was the treachery of which they had been guilty, the Chiricahuas alleging that they had made it a point to kill their women and children and run away from their men. He further said that on a recent occasion they had invited a delegation of Chiricahuas to visit one of their small towns near Casas Grandes, and while receiving them with outward manifestations of good will, had gotten them all under the influence of liquor and then murdered a number and taken others prisoners.

It was also stated that with Chato's band was a small white boy, captured in New Mexico, and corresponding so closely in description to Charles McComas that I have no doubt it is he. He said that in consequence of the attack the Chiricahuas had scattered to the mountains like so many quail, and that he would go back and gather them together and return; "but," said he, "you have Apache soldiers with you, and my people will not respond to any smoke-signals, because they'll be sure your scouts have made them."

He went on to say, "that the captive boy was alive and in good spirits, but had gone off with the squaws, who had broken away from the camp upon discovering that our scouts were closing in upon them."

From that on the Chiricahuas came in rapidly from all points of the compass—men, women, and children. All the chiefs surrendered, gave themselves up.

Jeronimo, Chato, Bonito, Loco, Nachez (the son of Cocheis), and one named Kantin-no, or "Looking-Glass," who was not recognized as ever having been on the reservation. He said that he had never been on the reservation, and had always lived in the Sierra Madres.

The only Indian of prominence whom I did not meet was Juh. The Indians stated that there had been a tribal difference, and in consequence of bad blood Juh, with one man and two or three squaws, had gone off into the country near the sources of the Yaqui River, some distance to the south.

These chiefs said that they wanted to make peace and return to the San Carlos Reservation. I replied that they had been committing atrocities and depredations upon our people and the Mexicans, and that we had become tired of such a condition of affairs, and intended to wipe them out; that I had not taken all this trouble for the purpose of making them prisoners; that they had been bad Indians, and that I was unwilling to return without punishing them as they deserved; that if they wanted a fight they could have one any time they pleased. I told them that the Mexican troops were moving in from both sides, and it was only a matter of a few days until the last of them should be under the ground.

The best thing for them to do was to fight their way out if they thought they could do it. I kept them waiting for several days, and each day they became more and more importunate. Jeronimo and all the chiefs at last fairly begged me to be taken back to San Carlos. I replied that they were asking a great deal, that I had no power to put them on the reservation, and that I could not close my eyes to the atrocities of which they had been guilty; many of the Americans wanted their band rooted

out, and that if I took them to San Carlos, no doubt a cry would be raised for their blood.

They had not only to face the Americans but the Mexicans also, whose people they had murdered in so cruel a manner. They could not expect me to fight their battles or palliate their villainous conduct. Jeronimo and the others then said: "We give ourselves up; do with us as you please." They begged me to remain where I was for a few days longer, and explained what scarcely needed explanation, that the country was so fearfully rough, they could not gather up all their people at once, as they were so much scattered. To this I could not assent, the supply of rations for the command making such delay impossible. We had by this time 384 Chiricahua Indians and 6 Mexican captives to feed, and it was about as much as we could do to get back to our base without danger of starvation.

Jeronimo then said that if we would go along slowly towards the boundary they could send their runners out to warn all those who had not yet come in, and they would try and overtake us at San Bernardino; or, if not successful in that, would move along the mountains until they reached San Carlos.

I assented to their sending after the remainder of their people, still hiding in the mountains, but refused to give them any written passes, telling them that if they could not catch up with the troops they must take their chances of being killed by any Mexicans or Americans they might encounter.

In dealing with this question I could not lose sight of the fact that the Apache Indian represents generations of warfare and bloodshed. From his earliest infancy he has had to defend himself against enemies as cruel as the beast of the mountain and forest. His own nature differs but little from that of the wolf or coyote; in his brief moments of peace he constantly looks for attack or ambuscade, and in his almost constant warfare no act of bloodshed is too cruel or unnatural.

It is, therefore, unjust to punish him for violations of a code of war which he has never learned, and which he can with difficulty understand. He has in almost all his combats with white men found that his women and children are the first to suffer, that neither age nor sex are spared. In the surprise and attack of camps women and children are killed in spite of every precaution; nor can this loss of life be prevented by any orders or foresight of the commander any more than the shells fired into a beleaguered city can be prevented from killing innocent citizens or burning private property. Nor does this fact surprise him, since it is in accordance with his own custom of fighting, but with this fact before us we can understand why he should be ignorant of the rules of civilized warfare. All that we can reasonably do is to keep him under such supervision that he cannot plan new outbreaks without running the risk of immediate detection; for these new acts of rascality punish him so severely that he will know we mean no nonsense.

As rapidly as possible make a distinction between those who mean to do good and those who secretly desire to remain as they are. Encourage the former and punish the latter. Let the Apache see that he has something to gain by proper behavior, and something to lose by not falling in with the new order of things. Vengeance is just as much to be deprecated as a silly sentimentalism.

To attempt to punish one or a dozen of the tribe for deeds of which all were equally guilty would be a gross act of tyranny, while to attempt to punish all after they had surrendered in good faith would not only be perfidious but would involve us in a war with a small but desperate handful of men who would then fight with the recklessness of buccaneers under the black flag.

The chief is no more guilty than every member of his band, since he has often less influence than individual members, being merely their mouthpiece or spokesman. To punish individuals guilty of particular crimes could be done, were it possible to get evidence, but from the nature of things this is impossible.

The Chiricahuas of to-day are not a whit worse than were the rest of the Apaches—6,000 in number—who were driven upon the reservation in 1873.

The task of managing that number was more formidable than that of looking after the Chiricahuas can ever be, but it was accomplished without any trouble, except such as was stirred up by greedy white men. Many of the Apache chiefs of that day were sullenly opposed to the new order of things.

They were ferreted out and broken of their power for mischief, while those who favored the ways of civilization were supported by every influence we could bring to bear. The Chiricahuas will present no difficulty whatever in the work of subjecting them to peaceful restraint and good discipline.

They were not deprived of their arms for the best of reasons. It is not advisable to let an Indian think that you are afraid of him even when fully armed. Show him that at his best he is powerless in your hands, he will become your best friend and cheerfully obey all that he may be instructed to do. It is unfair, too, to deprive him of means of protecting his home and property against the white scoundrels who, armed to the teeth, infest the border, and would consider nothing so worthy of their

prowess as the plunder of ponies and other property from unarmed Indians just beginning to plant or raise stock. So long as white horse and cattle thieves roam the country, so long should the Indians at the San Carlos be allowed to carry arms for their own protection.

Further, it is not practicable to disarm Indians. Their arms can never be taken from them unless they are taken prisoners with their arms in their hands, while engaged in fighting, by sudden surprise or disabling wounds. When Indians first surrender or come upon a reservation they anticipate being disarmed, and make their arrangements in advance, cacheing most of their best weapons and delivering up only the surplus and unserviceable. The disarming of Indians has in almost every instance on record been a farcical failure.

Let me cite the case of the Cheyennes who surrendered in 1878. They were searched with the greatest care when they were confined, and it was believed with the fullest success, yet when they broke out of prison at Fort Robinson, Nebr., they appeared well armed with guns and knives and ammunition. Doubtless their weapons had been taken apart and the pieces concealed by the women under their clothing, and this for weeks prior to the outbreak.

The warriors with Jeronimo—36 in number—had been on a raid through western Chihuahua, driving off cattle by the hundreds, killing men on the highways, and capturing five Mexican women and one child, whom we took charge of and cared for as fully as our facilities would permit.

These women stated that they had been captured May 9, 1883, near the village of Carmen, not far from the Mexican Central Railroad. They related a piteous tale of ill-treatment during the fourteen days of their captivity, scarcely alleviated by their knowledge that Jeronimo proposed holding them as hostages for the return of the Apache women and children who had fallen into the hands of the Mexicans at various times during the past year.

According to them, when their captors discovered that so large a body of Apache scouts had penetrated into the Sierra Madre, they became very much demoralized and abandoned them, together with some 300 head of cattle which they had gathered on their raid.

These cattle, a few days afterwards, were driven off by a detachment of Mexican troops who had started in pursuit from Casas Grandes, and the women struck our trail and followed it into our camp in a nearly famished condition.

We did not meet any of the Mexican forces during our absence.

In crossing from the Sonora to the Chihuahua side of the Sierra Madre, we came across a placard bearing an inscription to the effect that the eleventh battalion had reached that point on the 21st of May, but on that date we were on the Sonora side and farther to the south.

On the 10th of June, after a series of short marches, we rejoined the supply camp at Silver Springs, Ariz., proceeding thence to the railroad and sending the Mexican captives to Tucson, where the consul of Mexico, Mr. M. V. Lomelli, received them most kindly.

A map of the line of march, (itinerary of the march) prepared by Lieutenant Fiebeger, Corps of Engineers, acting A. D. C., is inclosed.

The conduct of officers and men who shared the hardships and dangers of the trip merits commendation.

I have issued a general order thanking my scouts and their officers, and the guides of the expedition, for their services in furtherance of successful issue.

I desire, in addition, to mention my appreciation of the services rendered by Lieut. Frank de L. Carrington, First Infantry, who acted as field quartermaster and commissary at Willcox, and during the march to the boundary and at the camp at Silver Springs, and was called upon to perform much arduous and severe labor.

Upon my arrival at my supply camp at Silver Springs the captured Chiricahuas were sent by easy marches to the San Carlos Reservation in charge of Captain Crawford and his scouts, where they arrived June 23, 1883. They numbered 52 men and 273 women and children, present among the number the chiefs Nana, Loco, and Bonito.

I may add that the fact that the Indians left behind have not come in is a matter of no significance. Indians have no idea of the value of time. The members of Loco's band who came into San Carlos in May last were sixty-six days in making the journey, though they had 40 or 50 miles less distance to travel than those whom I left in the Sierra Madre.

Very respectfully, your obedient servant,

GEORGE CROOK,
Brigadier-General, Commanding.

The ASSISTANT ADJUTANT-GENERAL,
Military Division of the Pacific,
Presidio of San Francisco, Cal.

APPENDIX F.

Memorandum of the result of a conference between the Secretary of the Interior, Commissioner of Indian Affairs, the Secretary of War, and Brigadier-General Crook, July 7, 1883.

In view of the difficulties encountered in making satisfactory disposition of the Apache Indians recently captured by General Crook, under existing methods of administration, it is determined by the Secretary of War and the Secretary of the Interior, after consideration, that the Apache Indians recently captured by General Crook and all such as may be hereafter captured or may surrender themselves to him, shall be kept under the control of the War Department at such points on the San Carlos Reservation as may be determined by the War Department (but not at the agency without the consent of the Indian agent), to be fed and cared for by the War Department until further orders.

For the greater security of the people of Arizona, and to insure peace, the War Department shall be intrusted with the entire police control of all the Indians on the San Carlos Reservation, and charged with the duty of keeping the peace on the reservation, and preventing the Indians from leaving it, except with the consent of General Crook, or the officer who may be authorized to act under him.

The War Department shall protect the Indian agent in the discharge of his duties as agent, which shall include the ordinary duties of an Indian agent, and remain as heretofore, except as to keeping the peace, administering justice, and punishing refractory Indians, all of which shall be done by the War Department, as above stated.

ROBERT T. LINCOLN,
Secretary of War.

H. M. TELLER,
Secretary of the Interior.

Official copy:

GEO. D. RUGGLES,
Acting Adjutant-General.

ADJUTANT-GENERAL'S OFFICE, *July* 7, 1883.

APPENDIX G.

[General Orders No. 13.]

HEADQUARTERS DEPARTMENT OF ARIZONA,
Whipple Barracks, Prescott, July 24, 1883.

I. In accordance with instructions received from the Secretary of War, the entire police control of the San Carlos Reservation is placed under charge of Capt. Emmet Crawford, Third Cavalry, who will carry out such provisions of the results of the conference between the Secretary of War, the Secretary of the Interior, the Commissioner of Indian Affairs, and General Crook as may devolve upon the War Department.

He is charged with the duty of keeping the peace on the reservation, administering justice, punishing refractory Indians, and preventing them from leaving the reservation, except by proper authority.

All the Indian prisoners recently captured by General Crook and all such as may be hereafter captured, or may surrender themselves, are placed under the control of Captain Crawford, to be cared for and fed by him.

He shall also protect the Indian agent in the discharge of his legitimate duties on the reservation.

II. Second Lieut. Charles B. Gatewood, Sixth Cavalry, will report to Captain Crawford for duty, in connection with paragraph I of this order.

By order of Brigadier-General Crook.

G. J. FIEBEGER,
Acting Aid-de-Camp.

APPENDIX H.

Conference between General Crook and between 400 *and* 500 *men of the Apache tribe at San Carlos Agency, Ariz., October* 15, 1882.

Present, General Crook, Captain Bourke, A. D. C., Surgeon J. O. Skinner, U. S. A., Agent P. P. Willcox, and Mr. Taggart, his clerk. Mr. C. E. Cooley and "Severiano" as interpreters.

General CROOK. I have not wished to speak to you before I had made an examination of your country; I have now done this and am ready to talk with you. I know there has been much trouble and discontent. The President sent me to fix it up. I found you told and believed one story and the whites another; I determined then to wipe out the past and have a commencement on a clean foundation. The deserters who were taken to Tucson have been released and none of you have been harmed for the past. Many of the whites will blame me for not punishing you. I have been your friend, and now you must be my friend and sustain me in order that I may carry out successfully the policy I have instituted.

GUDI, GUNYE, SANCHEZ, and SHUTTLEPAN. We understand you.

General CROOK. The whites are very numerous and scattered over an immense country. They do not know one Apache from another. If any harm is done by any Apache, these whites will blame me for it and say that some of the Apaches here have done it. If anything happens here to-day it is telegraphed over the country to-morrow and everybody knows it. It sounds much worse there than here; you know how that is; if you are away in the Sierra Blanca and hear any story, you know how you feel about it. The Mexicans are complaining that our Indians are down there killing their people, and those same Chiricahuas are liable to come back here at any time and commit depredations. I have just been down on the line and have had a hard, disagreeable ride, doing your work, trying to get in those Indians, something you have got to do for yourselves. You can't have any rest here until those Chiricahuas are brought in, and *you* must bring them in. You must do this *at once*. I have been here now longer than I should have been. We shall forgive the Chiricahuas just the same as we have forgiven you. Every day complaints come in of Indians being off their reservation, doing mischief here and there. All these stories do you harm and make the white men unfriendly to you. In order to stop this, I must know every Indian on this reservation, and I am going to have a brass tag with a number on it for each Indian, and a book with the Indian's name in it, and the number of his tag, and every Indian who can't produce such a tag shall be considered a hostile. Then I'll count you every day until all the Chiricahuas and others now out have come in. All of you have been telling me that you want to go back to your own country to put in your crops. Get everything straightened out, do as we tell you, get all those Indians in, and then, by next spring, you can go to your own homes to plant your crops.

You know how we did when I was here before. I have been among Indians all the time since, and you know that you can't deceive me as you have been deceiving the other people. You know I have always been your friend; had you done as I once told you to you would to-day have been rich and happy.

NODISKY'S BROTHER, ESKILTICHIYA. We are not as well off now as we were when you were here before.

General CROOK. I am doing all this for your good and because I want to advance your interests; I've always been your friend and worked for you, and you ought to have sense enough to see that I am not doing this work for fun, but to help you along.

NODISKY'S BROTHER, ESKILTICHIYA. The Chiricahuas never belonged to us. They are Mexican Indians, and have always raised trouble.

General CROOK. That makes no difference, *you* get the credit of it, and you've now got to go to work and bring them in here as I tell you. They are intermarried with you, and you will get the blame of all the mischief they do. It depends upon yourselves, whether or not you shall go back to your own lands to plant; I have told you the conditions. In the spring, if everything goes aright, I will enlist scouts on a new principle. They'll live among their own people and control them just as we control ours.

SANCHEZ. [In a surly manner.] You needn't to put that condition upon my grounds. You can talk for the Indians who are out.

General CROOK. You'll be counted here every day until those Indians are brought back. If you or any others intend to give trouble you'd better commence now. If there is any fighting to be done I want to have it now. If you think I don't mean what I say just try me and you'll soon find out. Another thing I am going to do is to break up the making of tizwin. There are a lot of idiots here who let Eskiminzin and other Indians make money out of them by selling them tizwin, instead of keeping their money as I told them. Eskiminzin has become rich selling you tizwin. You must stop running away from the reservation. All of you must have passes; unless you are soldiers you must get them from the agent.

SANCHEZ. Many of us have not been able to get passes when we asked for them.

General CROOK. Then you must stay within the reservation. I have told you what I intended doing, and if you don't understand me, ask me.

SANCHEZ. We understand you, and are all sorry, because we want to be able to go out to get buckskin for our moccasins, &c.

General CROOK. This will not last long, if you do just as I tell you. You've got to help me in this business, which is more for your good than my own. If you don't

want me to remain here, and don't help me, I can go away and let some of the other commanders return to take charge of you.

YAQUI. The Chiricahuas hate us just as much as they do the white men; have killed or stolen our stock and maltreated us.

General CROOK. That's all nonsense. You're married among them and they among you, and I want you to send out for them. Let me know at once what you are going to do, as it's no fun for me to stay here.

NODISKY'S BROTHER, ESKILTICHIYA. Give us the favor of sufficient time to find out all among us who have relatives among the Chiricahuas, so we can send out to them.

General Crook. All right, if you can get them in in a few days I'll wait here to talk with them. The Mexicans are killing the Chiricahuas now, and the Chiricahuas will be glad to get back here and behave themselves, and be kindly treated. You get them in here and I'll attend to them if they don't behave; we can manage them here, and if they do behave, I will be kind to them.

APPENDIX I.

SAN CARLOS, ARIZ., *August* 20, 1883.

SIR: In compliance with your request of August 9, 1883, I have the honor to report that I was assigned to duty at San Carlos Agency, Ariz., September 28, 1882, for the purpose of organizing and managing the Indian scouts to be maintained here, and to have entire police control of the reservation. At the time of my assignment I noticed among the Indians a feeling of distrust and uneasiness towards the agency employés and the military stationed here; this I think was due to the fact that they had not been properly treated and managed by those in authority who preceded us. Very little was said by them at first until they could observe for themselves how affairs were being conducted. After they had learned that their interests were being looked after, this feeling died away, and they became more cheerful and contented.

During almost a year that I have been here I have noticed a marked change for the better among them. The causes which have brought about this change I think are due to kind treatment, protecting them in their rights, and looking after their welfare generally. Their rations have been fairly and honestly dealt out to them; they have been assisted and encouraged to farm, to raise stock, &c., so as to be able to have something for themselves in the future.

The feeling among the different tribes towards each other is all that can be desired; they act in a friendly manner towards each other, and while they live apart in bands they greet each other kindly when they come together. There is no distinction made in this respect between the Chiricahuas lately brought here from Mexico and those who have been living on the reservation since it was established.

The Indians have all been peaceful, respectful, and obedient. There have been very few cases of misconduct, and these have been promptly reported and punished. I believe they conduct themselves as well as the same number of civilized people would living under the same circumstances.

The increase of cultivation this year over last I believe has been ten-fold. I visited the reservation twice last year during the growing season, and I saw very little land under cultivation. This year they have done very well, better than I expected they would do. They have had two drawbacks, however, to contend against, which should be overcome if possible during the coming year; one was the scarcity of seed for planting and the other the poor structure of their dams in the Gila River for irrigation. The latter I think can easily be overcome the coming year by a little labor on their part and some good competent person to superintend the work for them. The seed most needed and which should be furnished as early as possible is wheat, beans, potatoes, and new varieties of corn, watermelon and cantaleup. They should also be furnished with a few more farming implements. If they be furnished with seed and the farming implements required, and their dams improved, I don't believe it will be necessary to feed them longer than next fall, or until such time the coming year as they will be able to gather their crops.

One hundred and seventy-nine White Mountain and San Carlos Indians with their families were transferred from here to Cibicu Cañon and Carizzo Creeks, in the vicinity of Fort Apache, on the reservation, last spring, where they have raised crops this year. These Indians will require nothing from the Government after they gather their crops.

I have had a room set apart for the purpose of stowing Indian seed for next year's plant. So far twenty Indians have stowed barley and wheat for seed, and I think many of them will avail themselves of its use.

Each parcel of seed as it is turned in is marked with the name of the Indian's band, letter and tag number, so as to avoid mistakes being made in the spring when they

come to claim it. I encourage them as much as possible to live on their farms and protect and care for their own seed and farming implements.

The Indians during the year have raised a large amount of barley which they have disposed of, the largest part of it being sold to the Government for the use of the public animals in the service here. Some has been sold to the Indian trader and quite an amount to freighters passing through between Globe and Willcox. Their corn crop is large; I think after reserving what will be needed for their own consumption and seed for next year they will have some for sale. The only market they have for their produce is from freighters, the trader, and the quartermaster's department here.

They are being encouraged to stow their corn away and use it for meal; for this purpose there should be a grist-mill here and one at Fort Apache. In addition to what they have raised, and the crops not yet matured on the ground they have under cultivation, they have cut andturned in during the year to the quartermaster's department and at the agency about 400 tons of hay, cut with knives, and 300 cords of wood, for which they have been paid a liberal price.

I attach herewith a statement showing as near as can be estimated the amount of produce raised during the year.

This includes San Carlos, Fort Apache, San Pedro, and Arivapa.

Very respectfully, your obedient servant,

EMMET CRAWFORD,
Captain Third Cavalry, Commanding.

General GEORGE CROOK,
Commanding Department of Arizona, Whipple Barracks, Arizona.

Statement showing the amount of produce raised by the Apache Indians on the White Mountain Indian Reservation during the year 1883.

2,625,000 pounds of corn.	100,000 pumpkins.
180,000 pounds of beans.	20,000 watermelons.
135,000 pounds of potatoes.	10,000 muskmelons.
200,000 pounds of barley.	10,000 cantaloups.
12,000 pounds of wheat.	

Small patches of cabbage, onions, cucumbers, and lettuce have been raised.

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5 B.—REPORT OF COLONEL WHEATON.

HEADQUARTERS DEPARTMENT OF THE COLUMBIA,
Vancouver Barracks, Wash., October 1, 1883.

COLONEL: I have the honor to report that on the 3d ultimo, in compliance with paragraph 2, Special Orders No. 202, current series, War Department, Adjutant-General's Office, I assumed command of this department during the temporary absence of the permanent department commander.

Since the date of the last annual report the Indians throughout the Department of the Columbia have been quiet and peaceable, committing no depredations, and, except in one case, giving no cause for anxiety to the numerous settlers along the northern border near the British line. In the month of April, when I was in temporary command of the department, I deemed it necessary through the report of the commanding officer at Fort Spokane to move 2 companies of cavalry and 2 of infantry to a camp near the mouth of Foster Creek, on the Columbia River, as a precautionary measure in the event of serious disturbance or hostile demonstration by Indians on the "Moses" Reservation. No serious trouble with these Indians occurred, and reports just received from that locality indicate that Chief Moses, Sarsopkin, and Touasket, the heads of the most influential and important tribes and bands in that section, are quietly locating, as desired, on the Colville Reservation.

I do not consider it probable, from present indications, that any outbreak among the numerous tribes and bands throughout the department is likely to occur in the near future. The recent completion of the Northern Pacific Railroad and the rapid progress of the Short Line Railroad through the southeastern portion of the department have not only very materially and advantageously affected the question of quickly and cheaply supplying our remote posts, but the fact that troops can be speedilly moved by rail to any threatened point, will soon be understood by nomadic bands of Indians, and they will ultimately take lands in severalty and become, as many (notably the Cœur d'Alenes) now are, self-supporting.

I earnestly invite the attention of the division commander to the fact that during the past six years the allotments of quartermaster's funds to this department have been inadequate to the proper completion of barracks and quarters for the troops; at new posts funds are not supplied to finish buildings the troops have labored at for years; and at old posts buildings now past repair should be replaced by new. With this view estimates have been made and forwarded.

In the month of August the General of the Army inspected the more northern posts in this department, and received at them all those marked evidences of respect and affection that General Sherman's presence inspires among soldiers. They were proud to learn from his own lips that he was pleased with their military bearing and discipline.

During the past year the following changes in stations of troops have been made. In this connection I deem it proper to invite the division commander's attention to the fact that the Twenty-first Regiment of Infantry has served in this department—its headquarters at Vancouver Barracks—over eleven years, since July, 1872, and that a recent dispatch from the War Department, indicating that the regiment could not be moved east this fall, has occasioned deep regret among its officers and enlisted men.

CHANGES OF STATIONS.

First Cavalry.

Troop A, from Fort Walla Walla, Wash., to Fort Bidwell, Cal., Department of California.
Troop B, from Fort Colville to Fort Cœur d'Alene.
Troop F, from Fort Walla Walla to Fort Spokane.

First Artillery.

Battery I, from Fort Stevens to Fort Canby.
Battery L, from Department California to Fort Canby.

Second Infantry.

Company A, from Fort Cœur d'Alene to Fort Spokane.
Company E, from Fort Cœur d'Alene to Fort Lapwai.
Company C, from Fort Colville to Fort Spokane.
Company I, from Fort Spokane to Fort Cœur d'Alene.
Company G, from Fort Cœur d'Alene to Fort Spokane.
Company K, from Fort Spokane to Fort Cœur d'Alene.

Twenty-first Infantry.

Company E, from Vancouver Barracks to Fort Canby.
Company E, from Fort Canby to Vancouver Barracks.
Company I, from Fort Lapwai to Vancouver Barracks.

The changes in the department staff have been:

GAIN.

Capt. A. S. Kimball, Quartermaster's Department, assigned to duty as chief quartermaster of the department, per Special Orders No. 208, current series, Adjutant-General's Office.

Capt. G. C. Smith, assistant quartermaster, assigned to duty in department, per Special Orders No. 90, Adjutant-General's Office, current series, and Special Orders No. 32, Military Division Pacific, 1883, and Special Orders No. 51, Department Columbia, 1883. Joined station April 16, 1883. Appointed disbursing quartermaster at Portland, Oreg., per Special Orders No. 208, Adjutant-General's Office, current series, and Special Orders No. 131, Department of Columbia, 1882.

Capt. W. A. Elderkin, Subsistence Department, assigned to duty in department, per Special Orders No. 79, Adjutant-General's Office, current series, chief commissary subsistence of department, per General Orders No. 7, Department California, current series. Joined station April 25, 1883.

First Lieut. Geo. W. Goethals, Engineer Department, assigned to duty as chief engineer officer of department, per Special Orders No. 246, Adjutant-General's Office, 1882, and General Orders No. 28, Department of Columbia, 1882. Joined station November 21, 1882.

Maj. James P. Canby, Pay Department, assigned to duty in department, per Special Orders No. 214, Adjutant-General's Office, 1882, and Special Orders No. 155, Department of Columbia, 1882. Joined station October 1, 1882.

Maj. De Witt C. Poole, Pay Department, assigned to duty in department, per Special Orders No. 189, Adjutant-General's Office, 1882, and Special Orders No. 160, Department of Columbia, 1882. Joined station October 21, 1882.

Maj. J. W. Williams, Medical Department, assigned to duty in department, per Special Orders No. 228, Adjutant-General's Office, 1882. Joined station October 26, 1882.

Capt. Marshall W. Wood, Medical Department, assigned to duty in department, per Special Orders No. 20, Adjutant-General's Office, 1883. Joined station February 28, 1883.

First Lieut. Edward Everts, Medical Department, assigned to duty in department, per Special Orders No. 164, Adjutant-General's Office, 1882. Joined station October 8, 1882.

First Lieut. Benjamin Munday, Medical Department, assigned to duty in department, per Special Orders No. 273, Adjutant-General Office, 1882. Joined station December 26, 1882.

Chaplain Winfield Scott, assigned to duty in department, per letter from Adjutant-General's Office, August 7, 1882. Joined station September 25, 1882.

Chaplain O. J. Nave, assigned to duty in department, per letter from Adjutant-General's Office, August 19, 1882. Joined station October 10, 1882.

LOSS.

Maj. E. D. Baker, Quartermaster's Department, chief quartermaster of department. Died at Vancouver Barracks, Wash., January 25, 1883.

Capt. Samuel T. Cushing, Subsistence Department, relieved from duty as chief commissary of subsistence of the department, per Special Orders No. 79, Adjutant-General's Office, 1883, and General Orders No. 7, Department of Columbia, 1883. Left department April 30, 1883.

First Lieut. Thomas W. Symons, Engineer Department, relieved from duty as chief engineer officer of department, per Special Orders No. 246, Adjutant-General's Office, 1882, and General Orders No. 28, Department of Columbia, 1882. Left department November 28, 1882.

Maj. W. H. Eckels, Pay Department, relieved from duty in department, per Special Orders No. 242, Adjutant General's Office, 1882. Left department November 28, 1882.

Maj. John B. Keefer, Pay Department, relieved from duty in department, per Special Orders No. 189, Adjutant-General's Office, 1882. Left department October 15, 1882.

Capt. Charles L. Heizmann, Medical Department, relieved from duty in department, per Special Orders No. 20, Adjutant-General's Office, 1883. Left department February 9, 1883.

First Lieut. William W. Gray, Medical Department, relieved from duty in department, per Special Orders No. 137, Adjutant-General's Office, 1882. Left department October 19, 1882.

Chaplain David Wills, relieved from duty in department, per Special Orders No. 182, Military Division Pacific, 1882. Left department November 8, 1882.

With few other not important changes the troops at all posts in the department have been incessantly employed and fully occupied with the various duties incident to their frontier stations, engaged in the intervals between target practice, drills, and instruction in either constructing new quarters or repairing their old ones.

I believe the command to be in excellent condition and improving. Its record of marksmanship this year is most gratifying. The department contest on the 15th, 17th, and 19th ultimo, when the leader of the department team scored 263 points of a possible 315, indicated a most satisfactory advance over the last or any previous year's target record, the highest score made being 12 points above the highest made last year, and thelowest on the department team being 27 points above the lowest made in 1882.

Sergeant C. H. Clark, Troop B, First Cavalry, carried off the department medal. The sergeant last year (which was his first year's practice) was second on his post team, second on the department team, and won the second prizes at the division and Army contest.

The following are the names of the Department Rifle Team, and shows the total score made by each:

1. First Sergeant C. H. Clark, Troop B, First Cavalry 263
2. First Sergeant Robert M. Hickey, Company D, Twenty-first Infantry..... 256
3. Sergeant Lloyd Henderson, Company E, Second Infantry..... 256
4. First Sergeant John D. Garber, Troop H, First Cavalry..... 253
5. First Sergeant Joseph Stahl, Company A, Second Infantry..... 249
6. Private William C. Smith, Company F, Twenty-first Infantry..... 249
7. Sergeant Nathan Compton, Company B, Second Infantry..... 247
8. Sergeant Arthur Thompson, Company H, Twenty-first Infantry..... 240
9. Private G. C. B. Glenk, Company C, Second Infantry..... 238
10. Sergeant Henry Reed, Troop E, First Cavalry 238
11. First Sergeant Felix Muraszko, Troop K, First Cavalry 236
12. Captain S. P. Jocelyn, Twenty-first Infantry 234

ALTERNATES.

1. Private Charles Howard, Company E, Twenty-first Infantry 230
2. Corporal Frank Kloeb, Company C, Twenty-first Infantry 226

DESERTION.

As required by General Orders No. 130, War Department, Adjutant-General's Office, 1882, a board of officers has convened in each case of desertion that occurred, and is made the subject of a special report.

INSPECTOR-GENERAL.

The report of the acting assistant inspector-general, submitted by Maj. O. D. Greene, assistant adjutant-general, gives the result of the monthly inspections of the posts by the commanders thereof. The accounts of the different disbursing officers have been regularly inspected, as required by regulations, the result in all cases being in the highest degree satisfactory.

This officer's reports as superintendent of post schools, and as superintendent of recruiting service, show that his examinations of the schools have been limited to Forts Canby and Stevens and Vancouver Barracks, his official duties at department headquarters not admitting of his absence for a sufficient length of time to make an inspection at the other posts.

The total number of enlistments has been 177, 55 of them being reenlistments.

JUDGE-ADVOCATE.

The report of the judge-advocate of the department shows the number of trials to have been 156 by general court-martial, by which 147 were convicted of the offenses charged, with 9 acquittals. The total number of trials show an increase over last year of 37.

QUARTERMASTER'S DEPARTMENT.

The report of the chief quartermaster shows that the total amount of appropriations for the repair of public buildings aggregate $32,408.44 during the fiscal year ending June 30, last, with the addition of $15,568.88 for hospitals. The total amount received by the chief quartermaster, under the different heads of appropriations for disbursement, was $516,264.51, the whole of which has been disbursed in settling outstanding accounts and indebtedness contracted in the fiscal year.

The total number of public animals on hand at the date of report was 1,831, including cavalry and artillery horses.

SUBSISTENCE DEPARTMENT.

The report of the chief commissary of subsistence shows the condition of his department to have been satisfactory. The contract prices of fresh beef show a very large increase in cost over preceding years, in some instances having doubled.

MEDICAL DEPARTMENT.

The report of the medical director shows the total number of discharges on surgeon's certificate of disability during the current year to have been 4. The number of deaths for the same period was 10. He reports the medical and hospital supplies furnished to have been of good quality, and the general health of the command to have been excellent.

PAY DEPARTMENT.

The report of the chief paymaster shows the total amount of receipts and disbursements in his department to have been $1,329,147.13. The troops have been regularly paid, and as promptly after each muster as was practicable.

ENGINEER DEPARTMENT.

The report of the chief engineer officer of the department shows that during the year he has made important surveys of the country lying between Old Fort Colville and Osooyos Lake, near the national boundary, and of Indian from the same point to the Skagit River via the head of Lake Chelan and Cascade Mountains. There have been mounted upon linen 85 maps; of these 37 relate to Alaska, and the remainder were department and territorial maps. There were 512 maps received, and 487 issued.

ORDNANCE DEPARTMENT.

The report of the chief ordnance officer shows the affairs of his department to be in a satistactory condition. His report as superintendent of target practice exhibits a very gratifying improvement in the marksmanship of the command.

The mounting of Light Battery E, First Artillery, ordered in August, 1882, was only accomplished on the 28th of June last, since which time it has been doing duty as such; the progress made has been satisfactory.

The system of telegraph lines in this department has been nearly perfected.

The personal and department staff are as follows:

PERSONAL STAFF.

First Lieut. Frederick Schwatka, Third Cavalry, aide-de-camp, now absent on reconnaissance in Alaska.

First Lieut. Oscar F. Long, Fifth Infantry, aide-de-camp.

DEPARTMENT STAFF.

Maj. O. D. Green, assistant adjutant-general, in charge of assistant inspector-general's office.

Capt. Frank D. Baldwin, Fifth Infantry, acting judge-advocate.

Capt. W. A. Elderkin, Subsistence Department, chief commissary of subsistence.

Maj. John Moore, Medical Department, medical director.

Lieut. Col. Rodney Smith, Deputy Paymaster-General, chief paymaster.

First Lieut. George W. Goethals, Corps of Engineers, chief engineer officer.

Capt. Cullen Bryant, Ordnance Department, chief ordnance officer.

Capt. Amos S. Kimball, assistant quartermaster, chief quartermaster.

If this report were made by the permanent department commander, I am confident he would express his obligations to the efficient and accomplished officers of the department and personal staff, who, during the year, have well maintained their established reputations.

I am, sir, very respectfully, your obedient servant,

FRANK WHEATON,
Colonel Second Infantry, Brevet Major-General,
United States Army, Commanding.

The ASSISTANT ADJUTANT-GENERAL,
Military Division of the Pacific, Presidio, San Francisco, Cal.

6.—REPORT OF COLONEL MERRITT.

HEADQUARTERS UNITED STATES MILITARY ACADEMY,
West Point, N. Y., October 3, 1883.

SIR: I have the honor to submit my annual report to include the 1st of September, 1883.

On the 1st of September, 1882, the order abolishing the Military Department of West Point went into effect, and the command of the post of West Point, including the superintendency of the Military Academy, was assumed by the undersigned. This being the re-establishment of affairs as they had existed for a long term of years was easily accomplished, and nothing worthy of special mention has occurred contingent on the change.

On September 1, 1882, there were present for duty 8 professors and 43 commissioned officers, making a total of 51. Relieved August 28, 1883, commissioned, 11. Assigned August 28, 1883, commissioned, 15. Total present September 1, 1883, 55.

On September 1, 1882, there were 271 cadets present at the Academy. Since that time 21 have resigned, 26 have been discharged, 1 has been dismissed, 1 has died, and 52 have graduated, making a total loss of 101. The gain has been, new cadets admitted July 1, 1883, 109, and September 1, 1883, 32, making a total of 141, which, added to the total of cadets remaining at the Academy August 31, gives the total present September 1, of 311 cadets.

The health of the command during the past year has been excellent. There have been no deaths at the post among the cadets, officers, or soldiers. The prevailing diseases have been of malarial origin and of a mild type. The percentage of sick to the command is, as reported by post surgeon, one-fifth of one per cent. The percentage of cadets excused from recitations during the Academic year is nine-tenths of one per cent.

During the year the usual practical instruction in the three arms of the service has been given, under the direction of the commandant of cadets, with as good results in regard to proficiency as have ever before been attained. In addition, instructions in target practice with small-arms (pistol and rifle) have been given to the first and fourth classes. The fourth-class practice with the rifle began with the aiming drill and was carried through the firing at all ranges up to and including 500 yards. In this important practice, thoroughly given to the fourth class, for the first time, I believe, all the class were well grounded in the principles of rifle-firing. This instruction will be continued in each fourth class hereafter, with, I have no doubt, excellent results.

This year, also for the first time, instruction has been given to the fourth class in swimming. Sixty-seven members of the class which entered in June who could not swim were taught, and the officer in charge of the practice reports the class so well instructed that three-fourths of it were able at the close of the instruction to swim the Hudson River, and all the class, with two exceptions, were good swimmers.

The excellent results obtained in the instruction in the gymnasium are worthy of mention. Much has been accomplished even with the poor appliances now possible, and there is no question but that much more can be done if a suitable building for a gymnasium, for which estimates have been made, is appropriated for by Congress.

The instruction in the department of practical military engineering, under Capt. W. S. Stanton, Engineer Corps, during the year ending August 28 has been most thorough. It included practice for the graduat-

ing class in making a reconnaissance of a route of march of a column of troops, including the location of roads, streams, ranges of hills and mountains along the line of march. Practical instruction has also been given the graduating and present first classes in bridge-building (including ponton, spar, and raft) and the fabrication of the materials in military engineering. The course of practical instruction in observing with the sextant the sun for time and the stars for time and latitude and in making adjustments of the instruments, including the engineer's transit, has been given in this department to the present first class during the encampment.

In the quartermaster's department, under the direction of Capt. C. H. Hoyt, assistant quartermaster, United States Army, the following work has been done:

The new cadet hospital was sufficiently completed for occupation in December, 1882. The sum of $5,000, necessary to complete the second story of the hospital, furnish outside blinds, stairs, and surroundings, has been included in the estimate for the next fiscal year.

New boilers have been added for heating public buildings and an addition made to the boiler-house. Pipes have been laid and connections made to heat by steam from the main boiler-house the cadet mess hall, the new cadet hospital, the headquarters building, the library, the philosophical academy, the chapel, the basement of cadet barracks, and the extension of cadet barracks. It is hoped that these arrangements, made without special appropriations for the purpose, will greatly reduce the annual expenses for fuel and heating.

In the gas-works, improvements have been made by the introduction of a new bench of retorts and new purifiers, which will remedy defects heretofore felt in the quantity and quality of the gas supply. The new 6-inch main from the gas-works to the cadet barracks is now being laid. Its completion before cold weather sets in this year will be a great improvement for the light furnished the cadet barracks.

The new 12-inch water main purchased last year has been laid from the water-house as far as it would go. The sum of $3,000 was asked for to continue the main to the cadet barracks. Of this only $1,000 was appropriated by Congress, and this has been expended for pipe, valves, &c., and the pipe has been laid. It is estimated that $2,000 will be necessary to complete the work, and this has been mentioned in the estimates for the next fiscal year. When it is considered that what has been done is not useful unless the work is completed, and when it is known that the residents on the post farthest from the water source suffer for lack of adequate water supply, it is hoped the full amount asked for will be granted.

During the year numerous repairs have been made to the officers' quarters and other public buildings, so that they are all in a generally much improved condition. These repairs, including painting outside, are being continued.

A bath-house for enlisted men and their families has been erected and completed, with inside arrangements of bath tubs and hot and cold water, at a small cost, partly-worn material good for the purpose having almost entirely been used in its construction. This bath-house is a great convenience and of immense advantage in a sanitary point of view.

The bathing establishment for the cadets, partially constructed during the administration of my predecessor, it was found, by inspection early the last spring, would not answer the purpose for which it was intended. A new site was selected above the post, and, with the material

from the incompleted establishment, bathing grounds were made and dressing-houses constructed. These have been used by the cadets during the last summer, and will, with improvements by the means available, answer every purpose in the future. The cadets have been furnished with cheap bathing suits by the quartermaster and commissary of cadets, which are used when they are in the water for pleasure or for instruction.

In this connection I wish to call attention to the great necessity for increased bathing facilities for the corps of cadets in barracks. The bathing rooms they have now, some thirteen in number, are not nearly enough for the corps, which is now more than 300 strong. The limited number force the cadets to bathe too soon after meals and at other unseasonable hours. I hope the estimate made for an increased number of baths will be appropriated for by Congress.

The departments under the control of Brevet Major Spurgin, quartermaster and commissary of cadets and treasurer of the Military Academy, have been conducted to my entire satisfaction and in the best interest of the cadets and the Government. A conclusive evidence that the complicated duties of the supply departments are well performed is the fact that there is no complaint, where criticism and complaint are so often possible. Constant efforts are made to methodize and reduce the business of the departments controlled by Major Spurgin to a purely business footing, and the system of responsibility has in all its details been perfected.

An unusual effort has been made during the past year to retrench in matters of expense for the cadets in customs which have crept into the management of the Academy in the past, any one of which is insignificant in itself, but all of which in the aggregate go to make up a sum of considerable amount. This effort has resulted in considerable retrenchment, and it is hoped another year will show still better results in this respect. The average monthly cost of subsisting each cadet during the last year has been $17.92.

I am glad to be able to report that the general tone and discipline of the corps of cadets are good. With the exception of a very few cadets in each class whose record in demerits would justify the report of habitual neglect of the regulations, the remainder of the corps may be reported as attentive, or very attentive to regulations. For the half year ending May 31, 1883, nearly one-half the cadets in the corps had no demerits recorded against them and nearly one-half of the remainder had each less than eleven demerits. The number permitted, short of which a cadet according to the regulations is not deficient in conduct for the half year as above, is ninety.

In this connection I desire to make special mention of the efforts of the adjutant of the Academy to remove in various ways several causes of reports, by having printed and furnished to cadets blank forms of inspection, improved cards to explain authorized absences from quarters ("Hours of Instruction"), and other blanks which reduced the clerical work of individual cadets, thus removing fruitful sources of an accumulation of demerits and giving more time to the cadets for legitimate work. Formerly reports for offenses were of four different classes with special form of explanation for each; this cumbrous and complicated system has been remedied by reducing all reports to the same form, and consequently requiring but one form of explanations. These and other changes have much, in my opinion, to do with the reduction of demerits recorded against cadets as compared with the immediately preceding years. In this connection it is scarcely necessary to say that cadets have

been held to a strict accountability for all violations of the regulations, and that as a means to promote good conduct and care in the attention of all to duty, uniform punishments have been fixed for the more serious neglects and unmilitary conduct. As a means to the same end the new cadets admitted July 1, 1883, were carefully instructed in the regulations of the Academy, comprising their obligations, privileges, and duties, at the same time that they were being drilled in the school of the soldier.

The practice of hazing, some instances of which have come to the knowledge of the authorities during the year, may deserve a passing notice in a report of this character. I observe that my predecessors for the last twenty-five years have reported, at one time or another, that the practice had been broken up. I am sorry to believe that they have, without exception, been mistaken. By repressive measures the evil has been at times restricted to its lowest limits, but it has never been eradicated. Just the moment repression has ceased, the brutal custom has sprung up, with new features of brutality. While I do not favor threats to repress disorders, or pledges from cadets as a means of eradicating violations of the regulations, I am certain that the best means of maintaining discipline in any organization is the certainty of a summary punishment, just but severe, in all cases of intentional offense. If cadets wantonly violate the regulations in anything which involves their dismissal they do so under one or other of the convictions, that they will not be detected, or that some influence will prevent their punishment. In this matter of hazing the authorities here will indulge in no half-hearted measures to detect the offenders. In the matter of punishments the experience of the past should convince the guilty that they may not expect mercy from the War Department. Under these circumstances I see no reason why the pernicious practice may not permanently be put an end to.

The work on the extension of the cadet barracks is being rapidly pushed to its completion. It is thought that the new quarters for cadets will be ready for occupation by the middle of November.

In concluding my report I desire to call special attention to the departments of instruction in the Military Academy, in which there is everything to commend. I have never observed a more unflagging and energetic devotion to duty by officers anywhere in the Army than on the part of the heads of these departments. The friends of the Academy may be sure that not the smallest interest of the service will suffer traceable to any neglect of these. With the instruction given and the examples set it would be strange if the young officers turned out by the Academy at the present time were not exceptionally superior.

I have the honor to be, very respectfully, your obedient servant,

W. MERRITT,
Colonel Fifth Cavalry,
Brevet Major-General, U. S. A., Superintendent.

The ADJUTANT-GENERAL, UNITED STATES ARMY,
Washington, D. C.

7.—REPORT OF MAJOR LIVINGSTON.

HEADQUARTERS UNITED STATES ARTILLERY SCHOOL,
Fort Monroe, Va., October 17, 1883.

GENERAL: The annual report on the United States Artillery School is herewith respectfully presented as required.

Although my temporary succession to the command of it is recent, I shall endeavor to give the usual details of the school, which, it is hoped, will be found to possess sufficient importance to merit attention and continued support. The time embraced in this report (October, 1882 and 1883) comprises part of the second or last year of the usual term for officers of two years, which, according to established routine, will end for this class on May 1, 1884.

Referring to last year's report by General George W. Getty, commandant, it will be seen that with the commencement of the present term went into operation a new programme of instruction, which was presented to notice as an appendix to his paper; but I think I shall be better understood if I give a brief outline of the school organization before entering upon details.

The school has two grand divisions—division for commissioned officers, division for enlisted men.

DIVISION FOR OFFICERS.

The division for officers is divided into six departments, each comprising appropriate courses of instruction, as follows:

DEPARTMENT OF ARTILLERY.

Embracing the course in artillery; or,
Part I. Powder and its effects.
Part II. Material.
Part III. Fire and the effects of projectiles.
Part IV. Batteries and artillery emplacements.
Part V. Employment of artillery.
Part VI. Foreign artillery. Review of recent experiments and progress.
The whole supplemented by exercises in application.

DEPARTMENT OF ENGINEERING.

Comprising the course in topography, to wit:
Part I. Practical study of surveying instruments.
Part II. Lessons in the processes of topographical surveying.
Part III. Topographical design.
Part IV. Exercises in application.

2.—*Course on military communications:*

Part I. Military bridges.
Part II. Military roads.
Part III. Railroads.
Part IV. Exercises in application.

3.—*Course of temporary fortifications:*

Section I. Elements of temporary fortifications.
Section II. Application of temporary fortifications to ground.
Section III. Sieges.
Ended by exercises in application, in doors and out.

4.—*Course of permanent fortifications:*

Lessons and exercises in application.

DEPARTMENT OF MILITARY ART.

Comprising the course of military art, to wit:
Part I. Military policy and institutions.
Part II. Strategy.
Part III. Tactics.
Part IV. Operations of a mixed character.
Part V. Military hygiene.
Part VI. Military administration.
Part VII. Didactic study of campaigns and battles.
The whole supplemented by exercises in application.

DEPARTMENT OF LAW.

Embracing courses in international, constitutional, and military law.

DEPARTMENT OF APPLIED SCIENCES.

Comprising the course of sciences applied to military art; or,
Part I. Geology and military geography.
Part II. Manufacture of explosives.
Part III. Military pyrotechny.
Part IV. Metallurgy of iron.
Part V. Manufacture of cannon.
Part VI. Manufacture of small-arms.
Part VII. Electricity, telegraphy, and defensive torpedoes.
Supplemented by chemical manipulations connected therewith, and exercises in application.

DEPARTMENT OF PRACTICAL MILITARY INSTRUCTION.

Which embraces all drill and firing exercises of artillery and infantry practiced at the school.

Existing in connection with the foregoing is a chemical laboratory, photographic studio, electrical room, printing office, and repair-shop, so that the school possesses capital appointments (though by no means perfect) which, together with its curriculum, have been the growth of time, experience, and much patient painstaking labor on the part of the officers of our corps.

The character and limits of this paper permit no more than a passing assertion of efforts in the line of duty of the *personnel* of an institution the aim of which is to enlarge the mode of professional thought and confirm a correct and useful sense and habit of duty in the younger officers of the corps to which it pertains.

I shall now have the honor of speaking of the operations of the school more in detail under its various departments as exhibited above, only the sequence in which they will be arranged will be with reference to the chronological order in which they have followed each other in work during the year, it having been found expedient to temporarily change the allotment of time as laid down in the school regulations.

DEPARTMENT OF ENGINEERING.

Referring again to last year's report, it will be seen that instruction under this department was progressing, and that the class of student-officers was about to be sent on a practical reconnaissance—the detailed division of the district to be reported upon appearing in said report.

This work was duly carried out under the provisions of the following order, the officers being so engaged fourteen days:

GENERAL ORDERS, }
No. 24. }

HEADQUARTERS UNITED STATES ARTILLERY SCHOOL,
Fort Monroe, Va., October 31, 1882.

I. The officers under instruction will proceed, on Thursday the 2d of November, upon the execution of a reconnaissance survey, as indicated in the programme of instruction 1882, pp. 18 and 19, of the country south of White Oak Swamp, and between the Chickahominy and James River, Virginia—(*vide* memorandum of instruction for reconnaissance and survey approved in August, 1882).

II. The officers thus designated will report to Capt. James Chester, Third Artillery, instructor in engineering, at such hour on the day named as he shall designate, prepared for an absence of fourteen days from that date.

III. Asst Surg. S. G. Cowdrey, United States Army, First Lieut. Allyn Capron, First Artillery, and a detachment of enlisted men to be hereafter designated, are attached to this party.

IV. Battery commanders will furnish the necessary camp equipage for the use of officers of their respective batteries upon their application therefor, and the commanding officer of Battery A, Third Artillery, will furnish, in addition, the necessary camp equipage for enlisted men.

V. The command of this party, and the direction of the work designated, will devolve upon Captain Chester, assisted by First Lieutenant Capron. Captain Chester will designate a suitable officer of his command as acting assistant quartermaster and assistant commissary of subsistence.

VI. The post quartermaster will furnish the necessary transportation, and all baggage will be ready to be turned over to him by 6 p. m., on the 1st inst., but nothing in this order shall be construed as authorizing expense to the United States beyond what shall have been previously determined by the commandant.

By order of Brevet Major-General Getty.

CONSTANTINE CHASE,
First Lieutenant, Third Artillery, Aide-de-Camp and Adjutant.

On this reconnaissance are the reports and maps of each officer, and a map compiled therefrom by Second Lieut. W. W. Gibson, Third Artillery at that time a student at the school; a blue print copy of the latter is herewith submitted, the map not having been lithographed for want of time.

The officers then took up successively the courses in temporary fortifications and military communications, which were concluded by the final examination in engineering on the 30th January, 1883, the latter proving highly satisfactory. The course in permanent fortifications was necessarily omitted on account of the lack of time in which to prepare the text book.

This department has been under the immediate charge of Capt. Jas. Chester, Third Artillery, instructor, assisted by First Lieut. Sedgwick Pratt, Third Artillery. Captain Chester's report will be found in Appendix A, herewith, and will furnish the details of work in this successful department.

DEPARTMANT OF LAW.

The instruction under this department commenced on the 1st of February, 1883, and on account of the assignment of a new instructor on the 25th of January, 1883, Capt. Charles Morris, Fifth Artillery, it was carried through under Maj. S. S. Elder, Second Artillery, assisted by Captain Morris, Major Elder having been displaced as the regular instructor by promotion.

The department of law embraces essentially a text-book course, and, as has been reported before, has admitted of little change for years. Major Elder being now in Europe, the detailed report is rendered by

Captain Morris and forms Appendix B, herewith. The instruction was concluded by the final examination on the 14th of April, 1883.

DEPARTMENT OF ARTILLERY.

Instruction under this department immediately follows the preceding, and will extend to the 22d of December. As, for the sake of an equable division of labor, as well as for other reasons of propriety, the work of this important department is associated with that under two of the others, the order of succession was prescribed as follows, and has been as closely adhered to as circumstances permitted.

[GENERAL ORDERS No. 7.]

HEADQUARTERS UNITED STATES ARTILLERY SCHOOL,
Fort Monroe, Va., April 9, 1883.

[Extract.]

* * * * * * *

II. The following will be the alternation of the course of artillery with the associated courses under the department of applied sciences, commencing April 16, 1883, and closing December 22, 1883. (See general orders No. 28, of 1882, these headquarters.)

The superintendent of instruction, Major Lodor, Third Artillery, will designate the days on which the changes shall take place, in which duty he will be governed by the regulations and programme of instruction of the school, and the actual progress made by the class of officers, viz:

1. Preliminary instruction in chemical manipulations.
2. Part I, course of artillery—powder and its effects—during which students will be sent to the laboratory for practical analyses connected therewith.
3. Parts II and III, course of sciences applied to military art—manufacture of explosives; military pyrotechny.
4. Parts II and III, course of artillery—material-fire, and the effect of projectiles.
5. Parts IV, V, and VI, course of sciences applied to military art—metallurgy of iron; manufacture of cannon; manufacture of small-arms—during which students will be sent to the laboratory for practical analyses connected therewith.
6. Parts IV, V, and VI, course of artillery—batteries and artillery emplacements; employment of artillery; organization; foreign artillery; review of recent experiments and progress.

The exercises in application in connection with the foregoing will be given out in the discretion of the superintendent and instructors. See programme of instruction for details.

Artillery-firing practice—class D, artillery exercises—will be held during July and August, in accordance with school regulations, during which, instruction will be given in electricity, telegraphy, and defensive torpedoes. Part VII, course of sciences applied to military art.

By order of Colonel Getty.

CONSTANTINE CHASE,
First Lieutenant, Third Artillery, Adjutant.

Regarding the work of the department of artillery, it is proper to say that the very rapid advances which have been and are being daily made in artillery material and its application in modern warfare have rendered solid progress in the literature of the subject a matter of extreme difficulty. From the mass of matter which is published daily, at home and abroad, the instructor must select that which has been thoroughly tested and found to be sound in order to benefit young artillery officers at all, and, from the fact that we possess almost no modern armament, his task becomes no easy one to perform, either to the satisfaction of himself or his students. "The history of artillery is the history of the progress of the sciences"—always onward, never halting.

For these reasons, coupled with the lack of time in which to properly compile and print such matter as is available, the greater part of the course in artillery has been given necessarily in *viva voce* lectures for

this term. One section of the course alone—section 4 of Part I (ballistics)—has been printed, and for this the school is indebted to Capt. Jas. M. Ingalls, First Artillery, who also taught it in an admirable manner. Capt. J. B. Campbell, Fourth Artillery, is the duly assigned instructor in artillery, with Maj. Richard Lodor, Third Artillery, as superintendent. The report of the first-named officer will be found herewith as Appendix C.

DEPARTMENT OF APPLIED SCIENCES.

Work in this department proceeds in conjunction with that in the departments of artillery and of military art for the reasons given above. It exists for convenience in administration, and because the specialties with which it deals are considered to be essential in a course of instruction adapted to artillery officers whose duties have been and are very varied. The department is under the supervision of Maj. Richard Lodor, Third Artillery, and the corps of instructors and assistant instructors are as follows:

Capt. J. B. Campbell, Fourth Artillery, instructor in manufacture of explosives and military pyrotechny.

Capt. Jas. M. Ingalls, First Artillery, instructor in electricity, telegraphy, and defensive torpedoes, metallurgy of iron, manufacture of cannon, manufacture of small arms.

First Lieut. A. W. Vogdes, Fifth Artillery, instructor in geology and military geography.

First Lieut. Allyn Capron, First Artillery, assistant instructor in electricity, telegraphy, and defensive torpedoes, manufacture of explosives and military pyrotechny.

First Lieut. John P. Wisser, First Artillery, instructor in chemical manipulation; also, on account of extra work performed by Captain Ingalls, this officer has charge of the instruction in metallurgy of iron, which is now progressing.

The reports of these gentlemen will be found in Appendices C, D, E, and F.

As instruction in geology and military geography has not yet been reached there is no report to make. The same is true, also, of instruction under the department of military art.

DEPARTMENT OF PRACTICAL MILITARY INSTRUCTION.

As has been stated already, this department exists for convenience in administration and for the sake of complete system. It comprises all drills and exercises of the troops which are required daily, Saturdays and Sundays excepted; and its supervision is directly under the commandant, assisted by the field officers and captains.

Classed under this department are the artillery-firing practice and the musketry instruction, special reports on which are made, and are consequently omitted here. The former occurs during July and August in each year and at such other times as may be directed by the commandant; the latter when directed by the same authority; and I am gratified to be able to give assurance of zeal and progress in both by both officers and men. For musketry in the last two years the school has taken four medals (Army division and department) and one regimental medal (Second Artillery).

DIVISION FOR ENLISTED MEN.

This division of the artillery school has been changed but little in point of programme or method of instruction. The course embraces math-

ematics, geography, history, topography, penmanship, and tactics. This year work commenced September 30, 1882, under the supervision of Maj. S. S. Elder, Second Artillery, with First Lieut. Allyn Capron, First Artillery, instructor, and ended on the 2d of May, 1883, with the result exhibited, as follows:

[GENERAL ORDERS No. 9.]

HEADQUARTERS UNITED STATES ARTILLERY SCHOOL,
Fort Monroe, Va., May 7, 1883.

The following is the standing of the men attending the division for enlisted men, as determined by the staff of the United States Artillery School at the examination of May 2 *et seq.*, 1883.

Regular class—Men examined for certificates.

Names.	Arithmetic.	Geography.	History.	General merit.
Corpl. James Hays, Battery I, Fourth Artillery	2	2	1	1
Private Dando Rattler, Battery I, Fourth Artillery	1	4	5	2
Corpl. Daniel F. Ryan, Battery G, First Artillery	4	1	2	3
Corpl. James Law, Battery I, Fourth Artillery	3	3	3	4
First Sergt. Jacob Heller, Battery I, Fourth Artillery	5	6	4	5
Private Thomas A. Watson, Battery I, Fourth Artillery	6	7	6	6
Corpl. John J. Doyle, Battery C, Fifth Artillery	Def.	5	8	Def.
Corpl. John Boland, Battery K, Second Artillery	Def.	8	7	Def.

Advanced class, or men having previously received certificates in the regular course.

Names.	Algebra.	Geometry.	Arithmetic.	Geography.
Corpl. John Daley,* Battery G, First Artillery	1	1	....	....
Corpl. E. E. Schooley, Battery A, Third Artillery	2	2	....	....
Private John A. Pearson, Battery C, Fifth Artillery	2	3	2	1
Private Hugo Rhem, Battery K, Second Artillery	4	4	....	....
Private Dando Rattler, Battery I, Fourth Artillery	5	5	....	....
Private Samuel Gamage, Battery K, Second Artillery	....	....	2	2
Private Byron Woodson,* Battery A, Third Artillery	....	....	3	3
Private D. E. Langley, Battery C, Fifth Artillery	....	....	4	4
Private Alfred J. Tennyson, Battery I, Fourth Artillery	Discharged.			
Private J. L. Buckmaster, Battery C, Fifth Artillery	Discharged.			

*Discharged.

Corpl. P. S. Mathews, Battery I, Fourth Artillery, deserted.

Men examined not receiving certificates, having partially completed regular course.

Names.	Arithmetic.	Geography.
Corpl. Charles Adler, Battery K, Second Artillery	1	1
Private H. B. Cabaniss, Battery A, Third Artillery	2	2
Corpl. John Shirkley, Battery C, Fifth Artillery	3	....
Private Otto Edleman, Battery I, Fourth Artillery	4	....
Sergt. Michael Fetters, Battery C, Fifth Artillery	5	....

Primary class—Not examined.

Private L. A. Scott, Battery I, Fourth Artillery.
Private Thomas J. Murphy, Battery C, Fifth Artillery.
Private Charles J. Kaiser, Battery I, Fourth Artillery.

By order of Colonel Getty.

CONSTANTINE CHASE,
First Lieutenant, Third Artillery, Adjutant.

The proficiency shown by this class was extremely gratifying to the staff of the school, and the instructor deserves great credit for his labor.

As Lieutenant-Colonel Tidball, now of the staff of the General of the Army, is to relieve me almost immediately of command, I refrain from making recommendations, and conclude by chronicling the departure from the school of General George W. Getty, by retirement from active service, a commandant who will be long remembered for the impetus his influence has given to all branches of the school.

I have the honor to be, sir, very respectfully yours,

L. L. LIVINGSTON,
Major Fourth Artillery, Commanding.

The ADJUTANT-GENERAL, UNITED STATES ARMY,
Washington, D. C.

8.—REPORT OF COL. E. S. OTIS.

HEADQUARTERS
UNITED STATES INFANTRY AND CAVALRY SCHOOL,
Fort Leavenworth, Kans., October 6, 1883.

SIR: In obedience to instructions contained in your communication of the 19th ultimo, I have the honor to submit an annual report upon the proceedings of the United States Infantry and Cavalry School and affairs connected therewith. The report of last year—the first rendered—was made upon October 11. Since that date the school has progressed favorably. Many of the inconveniences and obstacles to efficient work, such as inadequate quarters, barracks, and buildings for educational purposes, which existed during organization, and, in fact, until very recently, have been overcome in a great measure, and it is believed that by constant labor for a short period the actual necessities of the post and school in these particulars can be provided. The pressing need for books, maps, charts, mechanical appliances, and mathematical instruments has been partially met and supplied from the post and school funds with very little assistance from extraneous sources. Two thousand dollars have been thus expended since last October, and probably a greater amount will be paid out in similar purchases during the coming winter and spring months. Still, hardly the nucleus of a desirable library has been obtained; mathematical instruments are extremely limited, and no attempt has been made to collect scientific or philosophical apparatus. The suggestion of the General of the Army, contained in his last annual report, that an annual appropriation of $5,000 could be yearly beneficially expended in the purchase of books and educational appliances, would, if favorably acted upon and carried into effect, soon relieve all temporary embarrassment, and enable instructors to impart much useful practical information in subjects which are of prime importance to officers of the Army.

The only change made during the past year in company organizations composing the garrison was the relief of F and H Companies of the Twentieth Infantry by Companies A and I of the same regiment during July last. A few weeks previous to this change I recommended the relief of one-half of the companies of the garrison in memoranda transmitted to the Adjutant-General, as follows:

Having in mind the interest of the school alone, I think that the companies, or a portion of them, should remain here for some time at least and be considered instruction companies. * * * They are now accustomed to methods of procedure, the result of months' experience, and will assist greatly in the rapid practical education of incoming officers. But it would not be necessary to retain all of them. Two companies of cavalry and two or three companies of infantry might be relieved without any great detriment; for those remaining would by example enable those arriving to acquire speedily the proficiency demanded for the proper education of officers. The companies of infantry and cavalry now here, and to be retained, to be replaced, after another period of two years, by other companies, when those to arrive this year will in turn become the instruction companies. * * * I am inclined to think that the relief of one-half of the companies during the present summer, and of the remaining half at the termination of the next two years' course, will work well in practice (as far as the interest of the school is concerned) and for the benefit of the service.

It was considered impracticable to carry out this recommendation, and the relief of the greater number of the lieutenants of the companies was then advocated, and was, to a great extent, effected. I am now more firmly convinced than formerly that one-half of the companies of the garrison should be relieved at the termination of every two years' course of instruction, that all regiments may have like opportunities to receive whatever benefits the school may confer, and that the good effected here may be as widely disseminated throughout the Army as possible. It will also be advantageous to the post to occasionally introduce new elements into its organized garrison.

When my last report was submitted the officers here assembled for instruction had entered upon the second year of the course—the first having been of limited duration, covering a period of but four months, as it had been cut short by the length of time expended in the organization of the school. This second year of theoretical instruction extended from October 2 to the following July. Forty-two officers entered the classes—twenty-two in the first and twenty in the second class. Of these seven were withdrawn for various causes and thirty-five remained, passed satisfactory examinations before the school staff, and received graduating diplomas. Of most of these it may be said that they far exceeded expectations in close and continued application, and in the knowledge which they displayed at final examination of all subjects of study pursued during the entire course. The success which the school has met with thus far must be attributed in a great measure to their cheerful obedience to orders and regulations and their willing labors. All, with scarcely an exception, seemed animated with the desire to acquit themselves creditably, both as soldiers and as students of military science. Not a case requiring decided discipline manifested itself. Harmony and good fellowship constantly prevailed. These gentlemen were relieved from duty at the post and school in July, and early in September the new details arrived and were immediately assigned to companies of the garrison. On September 10 the staff was convened for the purpose of classifying them for theoretical study. It was directed to examine all officers "present and subject to instruction during the ensuing school year, with a view to their classification;" to confine examinations to the following subjects, viz:

English grammar, geography, descriptive and physical, arithmetic, algebra, plane geometry, general history, United States history, composition, and written corre-

spondence, and to make them sufficiently exhaustive to test the general knowledge which the parties examined had of those subjects. The result showed the necessity of again forming two classes, as had been done with the previous detail of officers, and confirmed my impression, conveyed in a communication forwarded last spring wherein I stated that "in my opinion it would be necessary to maintain two classes at the school, each to have its own prescribed theoretical course of study, for the reason that the lieutenants will differ greatly in regard to educational qualifications and mental capacity. Some who enter the school will be trained students of comparatively broad culture, and others will be deficient in a knowledge of even the rudiments of the English educational branches. We are now so circumstanced, and future details will undoubtedly exhibit the same wide diversity of preparation to take up professional or scientific subjects." * * * Both a first and second class should be maintained, and first and second grade diplomas awarded upon graduation. Officers can be examined and classified when they report for duty, and opportunity given to those who fall into the second class to push forward into the first during the course, if they show the desire to do so and display the requisite ability.

The recommendations of the staff in regard to the classification, made after quite a protracted examination, were approved. Forty-five officers were examined, of whom twenty-eight were assigned to the first and seventeen to the second class. Each class was subdivided into two sections in order to secure the advantages of more frequent individual recitations. The course opened on Monday last, the 1st instant. The classification, the subjects to be pursued during the present year, and the time allotted to the consideration of each, also the instructors and their separate spheres of duty, are shown in Post Orders Nos. 233 and 235, which are herewith inclosed. That portion of the curriculum prescribed for the present term, or for the first half of the year, is largely confined to subjects of the most practical nature to officers of the line, or to those which they should necessarily be acquainted with in order to fulfill actual requirements in the positions which they fill. An intimate knowledge of these is considered of the utmost importance, and it is possible that a part of the second year will be given up to them. It depends entirely upon the proficiency displayed by the students at the next summer's examination. Therefore, the full scope of study for the entire course of two years cannot now be determined. Our intention is, however, to make it aid especially a development of the most essential professional attainments.

The classification above mentioned has been made only for purposes of theoretical instruction. For practice, officers join the companies to which they are temporarily attached, or they are united in one body under a competent instructor. The third paragraph of Post Orders No. 220, herewith transmitted, explains the nature of some of their present duties. In particular studies not pursued by both classes all the members of the class by whom the subject has been or is being pursued unite when directed to make practical application of the theoretical knowledge acquired. Theory and practice, in so far as opportunities offer or appliances are at hand, are taught simultaneously. In my last report I remarked that—

In establishing the school considerable difficulty was experienced in so regulating the duties of the different organizations represented as to avoid conflict of action, and at the same time to have opportunity for recitations and for the full performance of the other necessary duties devolving upon officers serving at a large garrisoned post. The bringing together of troops of the three arms, and of classes of officers separately identified with each, in order that all of the latter might be instructed in the various matters pertaining especially to each arm, as well as in those which are common to all, was an untried experiment. The process of uniting officers having dissimilar duties of unequal duration to be executed within the same, and also upon different portions of the day, for purposes of instruction, is in itself quite troublesome, but especially so at this post, which is in a continued state of unrest, owing chiefly to its locality and the transient character of some part of its garrison.

The difficulties which were at first met with in these particulars are

now scarcely apparent. Drills, recitations, ceremonies, and hours for study follow each other in rapid succession throughout the day; and as for practical instruction not considered strictly of a military nature, when the presence of troops is unnecessary, it can, if required to extend over a considerable portion of the day, be deferred to those months of the year when class recitations are suspended. Incessant labor and energy are demanded on the part of officers in order to execute satisfactorily all duties, but the experience of last year proves conclusively the wisdom of constant employment and the results which can thereby be obtained. However, some of the officers of the last class were called upon not only to perform their ordinary post duties (and these at times become burdensome because especially of the numerous boards and courts convened, of which they are made members, and frequently recorders of proceedings), and also their obligations as students of the school, but they were also detailed as instructors of school classes. Still they found time to acquit themselves with great credit to themselves in all of these varied capacities, giving proof that to the zealous officer and trained student the course of study, unaccompanied by outside or unusual requirements, is not difficult to master. At present sufficient instructors are stationed here to avoid the necessity of detail of any of the students of the school, except it may be for temporary purposes. Three members of the last class are employed in that vocation. Two of them remained here to fill positions under War Department orders, and one is an officer of the permanent garrison. Nearly all of the officers who gave class instruction last year are on duty at the post, and are again employed in those particular provinces of study which then occupied them. Their past experience has greatly increased their competency, and will enable them to show a greater degree of efficiency in those departments in which they have hitherto been very efficient.

The enlisted strength of the organizations composing the garrison has of late been much reduced. It is difficult to obtain desired results from tactical exercises without strong companies. Five or six officers cannot be advantageously employed at an infantry or cavalry company drill when but two or three sets of fours participate. Unfortunately for the benefit or greater success of the school proper, the post was inadequate to accommodate the number of officers and military organizations sent here in November, 1881, and since that time a great amount of fatigue duty has been of necessity performed, and must still, for a period at least, be continued. Details, therefore, from the companies are sometimes very heavy, reducing them much below effectiveness for tactical purposes, and then instruction languishes. For that reason I, a short time since, made application for an increase of the enlisted strength of infantry companies, mindful also of the fact that even when quarters, barracks, stables, &c., are constructed, there must still be large details to repair and preserve buildings, to care for and keep in order the extensive grounds, to furnish detachments occasionally called for by department headquarters, and to perform the multifarious duties devolving upon enlisted men at posts of the size of this one, and where, as in this case, a large concourse of officers are constantly present, and are periodically interchanging. To make tactical instruction effective it should be uninterrupted. From forty to fifty officers must be thoroughly grounded in all that pertains to the artillery, cavalry, and infantry tactical maneuvers. They must be passed methodically through the three arms of the service within a given space of time to acquire this knowledge, small detachments of officers serving in each arm at one and the same time. It cannot be satisfactorily accomplished

if drills revert to farces on account of insufficient strength
tions, or if they are not constantly progressing when the
mit.

Since October last five sets of barracks have been constr
for the commanding officer and staff of the post have bee
quarters for officers have been put in very good repair, and
commodious post hospital is in process of erection and bi
ready for occupancy within the present year. Additional
still needed. Married officers detailed for instruction are r
to have their families with them, because of a lack of acco
This appears unjust, even when viewed by the practices wl
vail; for officers assigned to company organizations servin ,st
demand and receive quarters on the ground that they are permanent,
as distinguished from those attached for instruction by War Depart-
ment order, when, in fact, many of the first class have no more perma-
nency than those of the second, if, as was the case last year, they are
to be relieved from the post upon graduation from the school. A few
brick cottages could be built, at an expense of not more than $1,500
each, for those students of the school who have families. As now
situated, they are obliged to maintain their families at some distant
point and to defray quite a large expenditure here, which the income of
a lieutenant, solely dependent upon his pay from Government, is scarcely
able to meet. I believe there are quite a large number of married offi-
cers in the Army who would not only gladly accept the detail for a
course of instruction in the school, but would seek it, could they be at-
tended by their families and avoid the expense which, under present
circumstances, they cannot afford.

A school for non-commissioned officers and such enlisted men as de-
sire to take a course of theoretical instruction has not yet been organ-
ized; proper rooms for that purpose have not been available until very
recently. We are now awaiting opportunity to put them in proper con-
dition, and shall endeavor to do so very soon, so that a winter session
may be held as an experiment to ascertain what benefits may be obtained
in that direction, in order to establish a school of this character perma-
nently if found to be practicable. Little has yet been done for the ad-
vancement of enlisted men. They seek, for the most part, their amuse-
ments and pleasures in the city of Leavenworth, and, in most instances,
the tendency has been towards demoralization. Some well-directed effort
should be made at once to neutralize this attraction, or at least to
diminish it, but what means should be used to produce desired results
is a matter reserved for future study and trial when time and oppor-
tunity will permit.

No confirmed regulations for the government of the post and school
have yet been prepared. Post orders are issued to meet varying
circumstances as they arise, which are modified from time to time as
occasion requires. No definite programme of instruction has yet been
adopted, but the studies of each term are fixed upon and arranged
after the capacities of students are carefully estimated. The results
of preceding terms determine the scope and character, to a great ex-
tent, of the instruction which is to follow. During the past summer I
had concluded that a set of regulations, compact and well defined, might
be prepared to govern all duties at the post, and to prescribe the course
of study and application for the school. Upon mature reflection, how-
ever, it appeared wise to defer action in this direction until a more ex-
tended experience or future developments should more clearly manifest
what and how much substantial good might be accomplished and by what

operations it could be best effected. All orders affecting government and general duties are compactly printed and freely issued. School circulars, in like form, to convey information regarding instruction, are furnished to all officers, but we are greatly hampered in not having the means to do all necessary printing. Thus far we have been obliged to depend upon a small regimental hand-press. Last winter carefully prepared estimates for a press adapted to the wants of the school were forwarded to superior authority, but a quantity of type, badly worn, and some other material, mostly worthless, were all that were obtained in response. Very little of it can be utilized. We find it impossible, therefore, to print a great deal of the manuscript prepared by officers upon subjects which they are engaged in teaching, and which would be of benefit to the students could they be furnished with printed copies of the same.

At no time since its organization has the school given more satisfactory promise of success than at present. The members of the new class have cheerfully taken up their labors, apparently impressed with the belief that the two years' course which they have undertaken is to be devoted to study and work. The conduct of most of them thus far, and the energy which they display, also the interest manifested by instructors, furnish assurances that the expectations of the General of the Army in the establishment of the school will at least be partly realized.

Full proceedings of the staff upon the final examinations of the graduates during last summer were forwarded to the Adjutant-General some time since. I have now the honor to transmit herewith post orders and circulars which indicate the methods of procedure which have governed duties here during the past year.

Very respectfully, your obedient servant,

E. S. OTIS,
Colonel Twentieth Infantry, Commanding.

ADJUTANT-GENERAL UNITED STATES ARMY,
Washington, D. C.
(Through headquarters Department of the Missouri.)

REPORT OF JOURNEY MADE BY GENERAL W. T. SHERMAN IN THE NORTHWEST AND MIDDLE PARTS OF THE UNITED STATES IN 1883.

Prepared by JOHN C. TIDBALL,
Colonel, aid-de-camp, brevet brigadier-general.

WASHINGTON, D. C., *October* 27, 1883.

GENERAL: In compliance with your instructions I have the honor of submitting the following report, made up from my notes of travel taken last summer while accompanying you on your tour of inspection and observation through the northern and middle zones of the western part of the territory of the United States:

The journey, as projected by you, was to be from Buffalo, N. Y., via the lakes to Duluth; thence by the Northern Pacific Railroad to Fort Ellis, Mont.; from Ellis through the Yellowstone National Park to Missoula; again on the Northern Pacific Road to Cœur d'Alène; and from there, crossing the national boundary at Lake Osoyoos, to Hope, on the Fraser River, in British Columbia. From Hope the journey was

to continue via Puget Sound to Vancouver, Wash., and from thence by sea to San Francisco; from San Francisco to Los Angeles, and thence by the Atlantic and Pacific Railroad to Santa Fé, N. Mex., Fort Lewis, Colo., Salt Lake City, Denver, Kansas City, Saint Louis, and back again to Washington.

Your original programme specified with minuteness the date at which each separate point on the route was to be reached, and proved in its execution so prophetically accurate that, notwithstanding the great extent and variety of travel embraced by it, the exact time in nearly every instance was hit. The route is laid down upon the accompanying map.

Your party, besides yourself, consisted of Mr. Chief-Justice Waite and Mr. Justice Gray, of the United States Supreme Court, Col. R. I Dodge, Eleventh Infantry, and myself. The Chief Justice meeting with an accident in the Yellowstone Park, was compelled to abandon the remainder of the trip.

On the morning of June 20 General Sherman and myself left Washington, via Harrisburg and Elmira, for Buffalo, reaching the latter place in the forenoon of the following day. Here we were joined by Justice Gray, who had arrived from Boston, and proceeding to Fort Porter called upon Colonel Mizner, commanding, and other officers of the post. The usual salute was fired in honor of the General, after which he made an inspection of the post, which was found to be in good condition. The garrison consists of two companies, F and G, of the Tenth Infantry.

In the evening we took passage aboard the steamer Nyack, Captain Connor, for Duluth, at the head of Lake Superior. At 4 a. m. on the following morning, June 22, we arrived at Erie, where we remained but a short time, and then proceeded on to Cleveland, arriving there at 4 p. m. Here we were taken charge of by Mr. Henry Sherman, nephew of the General, and were driven by him through some of the principal avenues of that beautiful city to his country residence, a few miles out of town; after which we called upon Colonel Harris and other prominent citizens of the place, and then returned aboard of the boat. At 10 a. m. of the following day we arrived at Detroit, and were met at the wharf by Colonel and Brevet Brigadier-General Clitz, commanding at Fort Wayne, whither he at once took us in carriages. The General was received with the customary salute, and, after inspecting the post, the garrison of which consists of the headquarters and four companies of the Tenth Infantry, received the officers and their families at the quarters of the commanding officer. In the evening we returned to the city, and were joined by the Chief Justice, who had arrived from his home in Toledo, Ohio. Upon invitation we visited the club and partook of lunch with Colonel Duffield and friends. About midnight we returned to the boat, and at 6 o'clock next morning, June 24, were at Port Huron, at which point the boat touched for an hour. Port Huron is a great thoroughfare for immigrants arriving from Europe by way of the Saint Lawrence River and the Grand Trunk Railway, which at this point crosses the Saint Clair River into Michigan and connects with the system of railroads leading to the great West. The night of this day was foggy and the following morning was drizzly and chilly. At daylight we entered the Saint Mary's River and at 11 were at the Sault de Sainte Marie. Here we remained for two or three hours, during which the General inspected the garrison of Fort Brady, and received the officers and their families at the quarters of the commanding officer, Captain and Brevet Lieutenant-Colonel Parke. The garrison consists

of two companies of the Tenth Infantry, in good condition, and post looking well. This station is a very desirable one, with the exception that during the winter months it is cut off from the world except by snow-shoe and sled travel to Petosky, the nearest railroad point, distant 115 miles. Adjoining the post is the small town of Saulte de Saint Marie, located by the side of the ship-canal constructed around the falls, and which makes navigation practicable between Lakes Superior and Huron. At this point is the mammoth lock for overcoming the difference of level caused by the falls of the river. A few hundred yards after passing the lock we emerged from the canal upon the waters of Lake Superior, and early in the morning of the following day, June 26, the boat touched at Marquette, and, after landing some passengers and freight, proceeded on, entering the mouth of Portage Canal at 11 o'clock. This is a short canal entering a winding stream leading to Portage Lake. The canal, stream, and lake form a short cut for vessels across the peninsula of Keweenaw, and saves to them many miles of sailing.

Branching off from Portage Lake to the northward we entered Torch Lake, at the head of which is Lake Linden, on which are situated the stamping-mills and the shipping point of the Hecla Copper Mines. Here we stopped for a short time and examined these extensive works, and had the entire operation of the separating process explained to us by the officials of the establishment. The copper, after being separated from the impure substances of the ore, is packed in barrels, usually old kerosine casks, and shipped to the eastern cities for smelting, refining, and marketing. The mines from which the ore is obtained are situated on a plateau 5 miles inland. The ascent to this plateau is by an incline railway for about a mile, after which the cars run in the ordinary way by locomotive. The works at the mines are very extensive, and the machinery employed for hoisting, pumping, and other purposes is simply immense. This mine is worked to the depth of 2,500 feet, and the daily product of it, we were informed, averages 60 tons of pure copper, worth at this time $300 per ton. There are no less than 1,900 workmen employed by this mine alone. Various other mines are in operation in this vicinity, but none on so large a scale as the Hecla. From the mines to the town of Hancock, distant 12 miles, we went by railroad, where we rejoined our boat, which in the mean time had gone around by the water channel to this point.

Hancock is on Portage Lake, here only about half a mile wide; opposite it and connected with it by an iron bridge is the town of Houghton. These towns have each about 6,000 inhabitants, all engaged in or dependent upon the copper mining of the neighborhood.

Late in the evening we left Hancock, and next morning found us in the open lake on our way to Bayfield, on the southern shore, where we arrived about 11 o'clock a. m., and after taking on some passengers proceeded on to Duluth, where we arrived soon after 5 in the afternoon, June 27. This ended our trip of six days on the lakes, and a most delightful trip it was. A fine boat, a splendid captain, and delightful weather combined to make this first stage of our journey most enjoyable.

The site of the new but flourishing town of Duluth is a continuation of steep, high hills and marshy flats along the lake shore. Taking a carriage we drove about the place. In the mean while the citizens, learning of the arrival of the General, had assembled in force at the Saint Louis Hotel to give him a warm reception. After this was over, about 10 p. m., we took car for Saint Paul, at which place we arrived next morning, June 28, and were met at the depot by a staff officer from General Terry, who at once conducted us in carriages to Fort Snelling.

Here we found the entire garrison paraded to receive the General. The light battery fired a salute, after which the whole formed column and escorted the General to the quarters of General Terry. We were here joined by Colonel Dodge, who had arrived from his post, Fort Sully, on the Missouri River. Our party was now complete. Colonel Dodge was assigned to all duties pertaining to transportation, camping, and messing, and at once set about laying in supplies for our trip. During the day the General inspected the post, the garrison of which consists of the headquarters and four companies of the Twenty-fifth Regiment of Infantry and Smith's Light Battery F of the Fourth Artillery, all in splendid condition. The two justices and myself drove over to Minneapolis, taking the Minnehaha Falls on our way. At Minneapolis we visited the Washburn Flouring Mill, one of the many that gives fame to this flour-producing city. The superintendent of this mill explained to us the novel and remarkable methods now employed in making flour. In the evening the veterans of the Grand Army of the Republic and other citizens of Saint Paul came in force to pay their respects to the General.

On the following morning, June 29, we left Saint Paul by rail for Brainard, on the Northern Pacific Railroad, in a special car placed at the disposal of the General. We were accompanied by General Terry, who was to go with us as far as Missoula, the most westerly military post of his command. The road along which we traveled, passing northwestwardly, traversed Minnesota through its most beautiful portions, rich in cultivated fields and forests of pine timber, thrifty with towns, and picturesque with lakes, streams, and prairies. About sundown we passed into the valley of the Red River of the North, at first rolling, but gradually falling off into a level prairie, rich, green, and extending as far as the eye could reach, uninterrupted by timber except slender fringes along the streams. The country is becoming quite thickly settled, and on every hand are the wheat-fields that have so justly made these regions famous. Soon after dark we passed Moorhead City, across the river from which is Fargo, both flourishing places. The next morning, June 30, found us passing through a rolling prairie country, destitute of trees, and with signs of settlement becoming fewer and fewer—only now and then a habitation by the way-side. At 6 we passed Bismarck, and about 2 p. m. entered the "Bad Lands" of the Little Missouri. These lands, although bad enough, are rolling in fertility as compared with others hereafter to be mentioned. Towards evening we reached Glendive, the first point going westward at which the Northern Pacific touches the Yellowstone. During the entire day a sirocco had been blowing which well-nigh withered us with its intensity. At Glendive we were informed that the thermometer had stood during the day at 114° in the shade and 128° in the sun, and that the sirocco had then been blowing for four days.

At 11 o'clock at night we reached Fort Keogh. The commanding officer, Colonel Wilkins, having been notified by telegraph, met us at the cars, accompanied by the officers of his post, and paid their respects to the General. The post being immediately on the railroad, the troops were formed in line near by, and the General passed along the line, reviewing them by the light of lanterns. The garrison of this post consists of the headquarters and eight companies of the Fifth Infantry and Troop E of the Second Cavalry.

The morning of July 1 found us still in the valley of the Yellowstone, which showed by the rapidity of its current that we were rapidly ascending. The river was booming from the melting snows of the mountains,

and much of the low land along it was overflowed. The valley in most places is several miles wide, and from the evidences of cultivation which we saw is all productive and capable of good crops of wheat, barley, oats, potatoes, and even corn. The adjacent hills and plateaus are said to afford good grazing, and we saw many fine herds of cattle. Farmers and herdsmen are rapidly settling up the valley, but owing to the absence of good timber their habitations and fences present but a sorry appearance. When the railroad is completed the forests of Northern Idaho will supply the deficiency and convert this valley into a region of high cultivation.

As soon as the mists of the morning cleared away we got our first glimpse of the Rocky Mountains. Looking to the southwest the Crazy Mountain Range was seen looming up, covered with patches of snow. About 2 p. m. we stopped for dinner at the span-new town of Livingston, so new that the dew of its birth was still on its brow. It is a typical railroad town of the West, containing all the modern improvements of such places. From here a branch railroad was being rapidly pushed forward south to the National Park, distant some 60 miles. About 3 p. m. we reached Bozeman Pass, leading over the Belt Range of mountains, separating the waters of the Yellowstone from those of the Gallatin. A tunnel is being constructed through this mountain; meanwhile the road passes over it in a winding course, with a grade of 215 feet to the mile. Extra locomotives are employed for carrying trains over. From the summit the descent is made into the Gallatin Valley, which has a rich soil, easily cultivated by irrigation. It has a length of over 30 miles and an average width of 12 or 14 miles. Near the center of it is situated the flourishing town of Bozeman, already containing several thousand inhabitants and pregnant with great expectations. The altitude of this valley is about 6,000 feet.

Immediately upon passing the divide the aspect of the country changes; the tawny waters of the Yellowstone give place to clear and rippling trout streams, the grayish clay and soft sandstone of the eastern side to dark, rich-looking soil and granite, trap, and lime rock formation. Vegetation likewise differs, that upon the western side being much the most thrifty and attractive to the eye. At the western debouch of the pass, and within sight of Bozeman, stands Fort Ellis. The railroad runs directly through the post, separating the cavalry stables from the rest of the garrison. All around, except to the westward, are mountains, with intervening foot-hills; to the westward, beyond the Gallatin Valley, is the Gallatin Range. About 4 p. m. we reached the post. The General was received with a salute, and we at once took possession of our camp, which had been pitched for us in anticipation of our arrival. It was most delightfully located on the high ground immediately in rear of the post, on the south side. The two justices did not stop, but proceeded on to Helena to pay their respects to the capital of Montana.

We remained in our camp until the morning of the 5th, when we started for the Yellowstone Park. In the mean while, on the 3d, the justices returned from Helena and took up their abode with us in camp. The General inspected the garrison, which consists of Troop D, Second Cavalry, and Companies C and E, Third Infantry, all under command of Major Gordon, Second Cavalry. Everything was in fine condition and the post comfortable; and now that the railroad has brought it within easy reach of other parts of the world it is a very desirable post. The weather was delightful, the days warm and the nights cool, almost frosty.

The justices were accompanied from Helena by Senator Edmunds,

who was received at the post with the Vice-President's salute, and the Chief Justice with the one specified in regulations for him. Senator Edmunds accepted an invitation from the General for himself and nephew, Lieutenant Arthur, United States Navy, to join us in our trip through the park, preparation for which he made by rigging himself out in a cow-boy suit of leather-colored duck, and providing himself with fishing tackle and other sporting outfit. He proved himself such an accomplished campaigner and such an enthusiastic sportsman that his singular outfit was entirely appropriate. On the morning of the 3d, our escort, Gregg's Troop D, Second Cavalry, with a pack-train of 40 mules, started so as to have the road in advance of us. The pack-train was loaded principally with forage. During the night of the 4th it rained, and the morning of the 5th was cold and drizzling. Under these adverse circumstances we struck our camp and packed up for the march to the park. At 9 a. m. we started; our transportation consisted of four spring-wagons for riding purpose and four wagons for camp equipage and baggage. We had with us a sergeant and ten infantry men for guard and police purposes about camp, and for assisting through difficult places on the road.

Upon leaving Ellis we followed the well-known road leading through Rocky Creek Cañon and Trail Creek Pass. Trail Creek is a tributary of the Yellowstone, and soon after reaching it the snow-capped mountains to the eastward beyond the Yellowstone came in view. On each side of the narrow valleys of the creeks just mentioned are rolling hills which at a short distance ascend to mountains. These hills and mountains are covered with luxuriant grass, interspersed with wild flowers. The mountains, although generally devoid of timber, have nevertheless a good supply of excellent pine, and several saw-mills were passed during the day. Here and there are ranches, the owners of which appear to give their attention principally to cattle-raising. Notwithstanding the severity of the winters and the deep snows, cattle are said to thrive well without being housed. The rain ceased about 11 and the sun came out cheerily.

Coal is found in abundance in these parts, and during the day we passed banks that were being worked. About 3 p. m. we reached Armstrong's ranch, situated at the crossing of Trail Creek, and went into camp. Distance from Ellis 16 miles; elevation 5,550 feet; good grass, wood, and water. In the evening it showered up again, driving us early to our tents and to bed.

July 6.—During the night it cleared up, and in the morning there was a sharp frost. Soon after 6 o'clock we resumed our journey. Six o'clock was the hour fixed by the General for starting, and was habitually adhered to throughout our marchings. Reveille was at 4 and breakfast at 5.

After following Trail Creek for about 8 miles, we crossed a low divide to another creek, which soon led us into the valley proper of the Yellowstone. This valley is inclosed on both sides by mountain ranges, still considerably splotched with snow. It is from 2 to 10 miles wide, bordered by rounded, sometimes abrupt foot-hills, extending back to the mountains. From the gorges of the mountains flow numerous streams fed by the melting snow, and crossing our track in gushing torrents, clear and cold. A good portion of this part of the valley possesses a fertile soil, requiring only irrigation to make it productive. The streams just mentioned could be made available for this; in fact, a good deal is already done in this way, and we saw many fine fields of wheat, grass, and oats. Some of the valley, however, is gravelly and sterile, with

considerable pedregal, making the road lumpy to ride over in vehicles. The Yellowstone has an average width of about 100 yards, and having a great descent, rushes on with fury. About noon we reached Botteler's ranch, where a halt was made for a couple of hours, during which some of us went to the river to fish. Colonel Dodge was very successful, filling his 12-pound basket with beautiful trout and graylings. Colonel Dodge was the principal fisherman of our party, and from this on, until we reached the Fraser River, in British Columbia, kept our mess well supplied with delicious trout. At 4 p. m. we reached Donohu's Creek and went into camp.

July 7.—After proceeding about a mile the road turns sharp to the left, following close by the river, which here emerges from a deep and rocky cañon. The river from this on to beyond the falls is shut in by mountains, through the gorges of which it forces its way. Occasionally along its course occur small pockets of comparatively level land, running up into the mountains; nearly all of these are occupied by settlers, many of whom have fine gardens and fields, irrigated by streams from the mountains. The road leads along the gorges and over the spurs of mountains, and is very rugged. All along gangs of laborers were at work grading a track for the railroad from Livingston to the park. Work on this road is being pushed with the greatest vigor, and the road is expected to be open for travel by the middle of August, in time for the excursionists of this year. The wagon-road upon which we were traveling had been constructed by private enterprise, and during the morning we passed the toll-gate, the keeper of which was loud in his complaints that the railroad would soon render his enterprise a financial failure. Soon after passing this we reached Park City, which is to be the terminus of the railroad, and is the newest of all new cities. It consists principally of one street, strung out along the line forming the northern boundary of the park reservation. There is only one side to this street, and it is occupied by every conceivable manner of shanty, the majority of which are drinking saloons. The other side of the street is not built up, because it is on the reservation.

At this point Gardiner's River unites with the Yellowstone. Leaving Park City and its motley inhabitants, we followed up the Gardiner, and passing over some very rough road reached the Mammoth Spring at 2 p. m. Here we found Captain Gregg, with our escort, encamped on a bluff overlooking a plain of several thousand acres of chalk-white geyserite. Here we also pitched our camp. Over against this bluff is the Mammoth Spring itself, forming a bluff several hundred feet high, and covering a space of a hundred or more acres. It is built up in curious and beautiful terraces, formed of geyserite deposited by the hot water which is constantly flowing from the great hot pools on the summit. Near the foot of this huge mound is situated the hotel now under construction. This is a three-story frame building capable of accommodating four or five hundred guests. It, however, has the disadvantage of occupying the most uninteresting site to be found within the limits of the park. Near the spring the Gardiner divides into two branches—the east and west forks. During the afternoon, taking horses, we rode around and over the spring and viewed its wonders. Cavalry horses were selected for riding purposes, and the pack-train got in readiness to carry us to those parts of the park impracticable for wheeled vehicles. On a knoll near the foot of the spring, and not far from the hotel, stands the residence of the superintendent of the park, and over it floats the Stars and Stripes, emblematic of his jurisdiction. The present superintendent, Mr. Conger, appears to be a man of energy and intelligence. His duties are to guard

the natural curiosities of the park and see that they are not injured by vandalism; to preserve the game supposed to be there; and to construct and keep in repair, with the small sums appropriated by Congress, all roads, bridges, &c. He has several assistants. Those whom we saw were either cadaverous consumptives who had sought this region to galvanize themselves into a brief continuance of life, or young, boyish persons, entirely unfamiliar with and unsuited to the duties required of them. Under the circumstances the superintendent manifestly has a big task on his hands. In superficial extent the park is 60 by 55 miles, making an area of 3,300 square miles, much larger than the State of Delaware and almost three times as great as Rhode Island. The park reservation is evidently too great. Beyond the preservation of the natural curiosities there can be no good reason for any reservation whatever. These curiosities cover comparatively but little of the reservation, and to this the area should be razeed, throwing all outside open to settlement like other public lands. This would permit private enterprise to construct roads, make bridges, and do all other things necessary for the convenience and accommodation of a curious public. The lands of the park, outside of what would be necessary for the preservation of the curiosities, is good for grazing and other purposes, and would be at once taken up, and soon good roads and other accommodations would follow, thus bringing these great wonders of nature within the reach of people of ordinary means. The Government has not and probably never will appropriate sums sufficient to provide for the wants of the public over so vast an area, and so long as it is a *reservation* private enterprise cannot enter it. The original idea in having it so large was to make of it a preserve for game. This has proved an entire failure. There is no game there now, and never will be so long as multitudes resort there for the purpose of sight-seeing. Wild game and multitudes are incompatible elements and cannot exist together.

July 8.—At 9.30 our entire party, with the exception of General Sherman, started on horseback for Mount Washburn, the Mud Geysers, the falls and cañons of the Yellowstone, and thence around to the Geyser Basins of the Madison. General Sherman having seen all these places upon a previous visit, continued directly on with the ambulances and wagons, intending to rejoin us at the Lower Geyser Basin. We were accompanied by the pack-train and a small squad of cavalrymen. Our trail led eastward up the gorge of East Fork of the Gardiner. About 3 miles out we came to the falls of this stream—three successive leaps of 45, 55, and 30 feet, respectively, each one of which would vie in beauty with the famed Minnehaha. Our trail, precipitous and winding, finally led to a rolling plateau, through which flows Black-tail Deer Creek, which we crossed about 12 miles out. This plateau was thickly swathed in grass and wild flowers, and our path led through numerous beautiful glens. The descent from the plateau was steep and tortuous, and brought us out on Meadow Brook, where we went into bivouac for the night, about 2 miles above Baronett's Bridge over the Yellowstone. This was one of the spots encamped upon in 1877 by General Howard in his remarkable pursuit of Joseph and his band of Nez Percés. The bridge, a rude affair at that time, was partly destroyed by the Indians; it is now a good wooden truss structure, spanning a narrow gorge of the river. In the evening the Chief Justice and myself walked down to it. The atmosphere was redolent with the fumes of sulphur coming from the multitude of hot springs lining the stream. What of the atmosphere was not sulphur appeared to be composed of mosquitoes. The like of it had never seen before. They are, however, harmless in venom as

compared with the mosquitoes of the East. Fortunately they disappear with the setting sun. Owing to elevation of this region and the rarity of the atmosphere, the moment the sun becomes obscured a chilliness too great for insects prevails. During the ride of the day we had the company of Baronett, or *Jack Baronett*, as he is better known by, and as he was one of the earliest explorers of this region I gathered from him what I could of its early history. It is a singular fact that this part of our country, the most remarkable and wonderful upon this continent, or perhaps in the world, was the last of the territory of the United States to be known or to be explored. The country surrounding it in every direction was thoroughly familiar to civilization long before the wonders of what is now the National Park were brought to the notice of the world. Its situation is the exact geographical center of the North American continent. The waters from it flow in every direction, and from the same mountains spring the sources of the Mississippi, the Columbia, and the Colorado. It is truly the apex of the continent. The Indians appear to have held its wonders in superstitious awe, and the accounts given of it by the few trappers who penetrated its solitudes, although true, were set down as pure and simple fabrications. So far as known, the first white man who visited this region was one Coulter, a hunter belonging to the exploring party of Lewis and Clarke, who came upon these wonders in the course of his lonely wanderings, and gave such a lurid account of their gloomy terrors, their hidden fires, steaming pits, noxious vapors, and all-pervading smell of brimstone, that the place received, and for a long time retained the name of Coulter hell.

Captain Bonneville, in his wanderings in the Rocky Mountains in 1834, struck upon some geysers, which from his account were probably outlying ones of these groups. In 1855–'59, Warren, of the topographical engineers—afterwards General Warren—explored the lower Yellowstone and was gradually working up towards the lake. Wonderful tales were related by his guide, "Jim" Bridger, of the marvels existing in those parts. An expedition was planned for the years 1859 and 1860, which contemplated the exploration of this basin. The work, however, was turned over to Captain Raynolds, of the same corps, who attempted to enter from the south, but, although making every effort, failed to surmount the snow covered mountains of Wind River. The war of the rebellion ensuing put an end for the time to explorations. Jack Baronett, however, claims that in 1864 he, with a party of miners, prospected from California as far east as Henry's Lake. Here most of the party, becoming discouraged, returned, but he and two or three others continued on, entered the Geyser Basins, and saw for the first time the geysers in operation. About the same time a man by the name of Shorthill, approaching from the north, discovered the Mammoth Spring, but proceeded no further. Baronett upon returning to civilization told of what he had seen, but was only laughed at, and for the time said no more about it. Having made his way to Saint Louis, he met, in 1869, a gentleman who in Iceland had witnessed geysers in operation, and was therefore capable of appreciating his account. This gentleman, it seems, was acquainted with General Washburn, then surveyor general of Montana, and related to him Baronett's story, interesting Washburn to such an extent that in the next summer the latter organized a party and explored the country. One of this party, Mr. N. P. Langford, gave in the May and June numbers, 1871, of Scribner's Monthly a most glowing account of the wonders of this land. These articles called the attention of the whole country to this remarkable region. Lieutenant Doane, Second Cavalry, accompanied

this party, and his excellent descriptive report of the expedition was the first published by the Government. Since then reports upon reports have been made and descriptions upon descriptions given to the world, until it would seem nothing farther could be said; but they each and all fall short; no power of pen, pencil, or brush can do justice to the subject.

July 9.—The morning was cold and frosty. Owing to the elevation of this region—7,000 feet above sea-level—the nights are always cool. Observations show that frost or ice occurs nearly every night of the year. A good supply of bedding is therefore necessary. The days, however, when the sunshines are warm, frequently hot. Our trail for 3 or 4 miles led south over a beautiful meadow, and then crossed Tower Creek so, named from numerous tower-like pinnacles surrounding a fall which the creek makes near its junction with the Yellowstone. The fall is a single leap of 150 feet. The stream afterwards rushes over rocky rapids through a gorge to the river below. This fall is exceedingly picturesque. After leaving the fall the trail bears off southwestwardly towards Mount Washburn, distant some 10 miles. Soon after starting upon it, while ascending a steep bluff, the saddle of the Chief Justice slipped, causing his horse to buck; the saddle then turning, the Chief Justice fell heavily to the ground, but fortunately in a place free from rocks or logs. At first he thought himself uninjured, but as he was about to remount he felt something wrong about his side. Within a few yards from this spot there happened to be a party of excursionists, and among them a physican, Dr. King, who, being called, pronounced a fractured rib as the result of the fall. He ingeniously extemporized a bandage and skillfully bound up the injured parts, after which the patient remounted and we proceeded on our way. We gradually ascended through a rolling and exquisitely beautiful country, until we reached the point for turning off to ascend Mount Washburn. From this point to the summit is about 3 miles, with a vertical elevation of about 2,000 feet. The Chief Justice was anxious to make the ascent, but was dissuaded from doing so. Other members of the party, except General Terry and myself, and Major Hughes, of General Terry's staff, declined, for one reason or another, venturing upon the toilsome climb. Major Hughes, having been there before, acted as our guide. Leaving the rest of the party to continue on to the Yellowstone Cañon, we started for the top, following the crest of a ridge, a sort of backbone which makes a comparatively gradual ascent to within about 400 vertical feet of the summit. This distance we made on horseback, frequently stopping to let our animals catch breath. The summit of Mount Washburn is 10,100 feet above sea-level. Neither our animals nor ourselves were accustomed to the rarified air of this altitude, and we suffered greatly in consequence. At several places we crossed snow-drifts. The snow was quite solid and we had no difficulty on this account. About one-fourth of a mile from the top (about 400 feet vertically) the mountain becomes so rocky that we dismounted and made the remainder of the distance on foot, stopping every few yards to take breath. The sky was overcast and the haziness prevented us from having a good view of the immense landscape spread out below us. A good way off in every direction the view is bounded by high sierras, more or less whitened with snow. To the southward was the Yellowstone Lake and the river meandering from it. The Geyser Basin was at our feet to the southwest. The wind was blowing strong and cold and we did not tarry long to enjoy the panorama. Our descent was over the same route we had come and was made without difficulty A good carriage road could be constructed to the very summit without

much labor or expense; and from what we afterwards saw in Colorado of the climbing capabilities of narrow-gauge railways, I know one could be operated here without difficulty. If the reservation were razeed in the manner heretofore mentioned it would not be long before such enterprise would open this region to the wondering eyes of seekers after the picturesque and grand. After descending from the mountain we took the main trail and followed our party to the cañon, a distance of 12 miles, most of which was through a dense pine forest between Mount Washburn and Mount Dunraven. The trail crossed many mountain streams, and in places was rocky, boggy, and precipitous. For 2 or 3 miles before reaching the cañon the country opens out into rolling meadows. We found our party in camp midway between the Upper and Lower Falls, overlooking the gorge through which the river rushes with turbulent rapidity. The distance between the two falls is only about a mile. For half a mile or so above the Upper Fall the river rapidly descends over a series of cascades, gaining great velocity, whence, upon reaching the brink of the precipice, the whole volume is thrown forward in a column of shooting jets that soon become a mass of spray and foam of such form as to make accurate measurement of the height of the fall an impossibility; it is, however, estimated at 115 feet. From here the river tumbles and roars over rocks and rapids until it reaches the Lower Fall, where it takes a clean leap of 310 feet. The beauty of the Upper Fall and the grandeur of the Lower are beyond description. The Lower Fall is the upper terminus of the Grand Cañon, which from here extends down the river several miles. The cañon is a huge gorge, having a depth of about 1,000 feet. At the bottom is the river compressed to a width of not more than 20 yards, and appearing when viewed from the height above like a narrow green ribbon, winding and twisting between the rocky edges. The sides of the cañon, as they ascend, slope outwards, and are fringed upon their crests with slender pines. The sides are broken into buttresses, columns, and pinnacles of volcanic rock of every conceivable size and shape, between and around which crumble and slide ancient geyser *débris* of many brilliant colors. Along the stream below are jets of steam. Moran in his painting of this scene, in the Capitol at Washington, has not exaggerated either in coloring or form. The view is so sublime that it inspires one with awe, yet there is something about it not entirely satisfying to the mind. The crumbling and sliding sides of the cañon impart to it the idea of instability. The granite walls of the Yosemite convey the idea that they have existed from the dawn of creation, and will stand without alteration to the end of time. Not so with the Yellowstone Cañon; it has an attitude of instability, an appearance of having come, is going, and in time will disappear.

While the Chief Justice and myself were viewing together this wonderful group of rapids, falls, and cañon we were caught in a violent storm of rain and hail. This wetting added, no doubt, ill effects to the injuries received in the morning by the Chief Justice.

July 10.—During the night, notwithstanding rain and wet, we slept soundly to the roar of the falls. The morning came out bright and clear. Taking the trail leading to the Mud Geysers, we soon came into a kind of wagon road which made progress more easy. We passed Cascade Creek on the way, and stopped a moment to view its picturesque fall. Our road for a few miles further on led over rough and hilly ground; it then emerged into comparatively open country and followed near the river. The latter is here from 100 to 200 yards wide, flowing smoothly, with gentle current, between low grassy banks, unconscious, as it were, of the terrible commotion it is so soon to experience. It is full of trout,

and is so clear that we could see them as we rode along. One of our party stopping for a few minutes, took with an ordinary string and hook, and flies caught from his horse, a lot of them, large, fine-looking fish, but full of worms and too diseased for food. All trout caught above the falls are so afflicted: those below are not. I have not heard that the cause of this has yet been satisfactorily explained. The river is full at this season of the year, and in many places spreads out into wide bayous. The road led through several of these, which were belly-deep to our horses. The rolling prairie over which we were now passing has a rich soil; it is 10 or 12 miles wide, ascending as we proceed until we come to Sulphur Mountain, a hill at the base of which is a boiling spring or pool, some 20 feet in diameter. The water was in a state of the most violent ebullition, and as it was the first of the kind we had yet seen, it excited great curiosity among us. In a little while we saw so much of boiling water that a small pool like this attracted no notice from us further than to keep out of its way and not be scalded. The steam given off smelt strongly of sulphur, and hundreds of small vents around, incrusted with flower of sulphur, gave off sulphurous vapor. Pure sulphur in lumps could be kicked up almost anywhere around. A hundred yards or so from this spot were a number of mud pools, averaging in size from that of a wash-tub up to 15 or 20 feet in diameter. The mud was boiling and puffing like mush in a pot, and was very curious to behold. In some places there were little jets not larger than a pipe-stem, spurting up to a height of several feet. All about were cracks and holes, down which could be heard steam and boiling water. The place everywhere was incrusted with white geyser deposit, which sounded hollow and threatening to the tread. In many places the crust was very thin, requiring caution to keep from breaking through into the boiling water. We subsequently found that all of these things existed for miles and miles. At first our animals were shy of such unusual and uncanny sights and sounds, but soon becoming accustomed to them picked their way among them without fear and trembling.

About 4 miles further on we came to the Mud Geysers; what we had seen were simply mud pools. Here we encamped near the banks of the river. The largest of these geysers is a pool of muddy water of a tawny color, giving off a fetid odor of a peculiar sour, metallic pungency. The pool is about 150 feet in diameter. Here and there were signs of boiling, but no violent action was observable. Our guide, Jack Bean, informed us that five or six years ago this pool was a true geyser, throwing up a column of muddy water some 50 feet high. Around and somewhat connected with this pool are a number of smaller pools of a similar character, the whole being in a depression or crater 10 or 12 feet below the level of the surrounding ground. All around the edge of this crater were vents giving off steam and fumes of sulphur. Geyser action is evidently dying out among these pools. Some hundred or so yards from these pools, in the bluff of the hill-side, is a cavern filled with thick muddy water in the most violent state of ebullition. The steam in forcing itself out heaves the mud and water forward like the action of the wheels of a steamer. The water and mud flowed back into the cavern immediately to be heaved out again by another pulsation. A short distance from this cavern, in the same bluff, is another acting in the same manner, but instead of thick muddy water it contains water as clear as crystal. The sounds from these caves were like the roaring of wild beasts, deep, hollow, and diabolical. These caverns were types of many others that we saw.

July 11.—Resumed the road, continuing westward towards the Fire-hole Basin, passing over a beautiful rolling prairie country, with here

and there a boggy place in the road. The Chief Justice was uncomfortable from the effects of his fall; consequently the march for the day was shortened to about 12 miles. We encamped a little way off from the main road, on a bluff, in the shelter of pine woods. A short distance from our camp, on a branch of Alum Creek, were the remains of an ancient beaver dam, in the pools of which were an abundance of trout, many of which were taken by the anglers of our party. The stream meandered through a beautiful meadow bottom. During the afternoon there were severe hail storms, accompanied by heavy thunder and lightning. Towards evening the Chief Justice became much distressed with paroxysms of pain. Alarmed at his symptoms, General Terry dispatched our guide (Jack Bean) to find the camp of General Sherman, supposed to be in the Lower Geyser Basin, and procure the services of Dr. McGuire, accompanying our cavalry escort. Bean was fortunate in finding the General's camp not more than 10 or 12 miles distant, and soon had the doctor in attendance upon the Chief Justice. The latter had a hard night of it—cold, wet, and with few surrounding comforts.

July 12.—The morning broke clear and cold; ice had formed in our buckets. The Chief Justice pronounced himself easier, and being assisted on his horse we regained the main road. Here there was an ambulance, dispatched by the General, in waiting for him. A few miles over rolling prairie brought us to pine forests, in which were groups of hot springs, and a little further on we came to Mary's Lake, a clear and beautiful sheet of water a mile long and about one-fourth of a mile wide. From general appearances it had evidently been at some distant age the crater of a huge geyser. Soon after leaving this we commenced to descend into the valley of the East Fork of the Madison, or, as it is usually called, the Firehole Basin. The descent to the valley is about 1,000 feet, and is quite steep, but over a good road, winding down the side of the mountain, a distance of about three miles. A dense growth of tall, slender pines covers the sides and crest of the mountain, but fire the previous year had deadened the forest, leaving the trees standing as bare poles. In our subsequent journeyings we saw, especially in Washington Territory and British Columbia, hundreds upon hundreds of square miles of such burnt deadenings. The fire sweeps through the forest, killing the standing trees, the bark from which soon falls off. The scorching which the trees get preserves them from decaying, but soon they rot away at the roots, and falling in every direction, make an entanglement of timber so intricate that a person can scarcely penetrate it even on foot. Another fire in time comes and consumes this fallen timber; a fresh growth springs up, which in time shares the same fate, and thus the operations of nature continue.

The valley below is a grassy meadow, about 10 miles in diameter, through which flows the East Fork of the Madison, a stream having here the dimensions and sluggish appearance of an ordinary canal. There are, however, no fish in it, owing no doubt to the noxious matter constantly fed into it from the geysers and hot springs. All around are low mountains covered with pine. About 2 miles from the foot of the mountain we came to General Sherman's camp, and gladly took possession of our tents. The General was absent, having gone to the Upper Geyser Basin, intending to bivouac for the night by the side of Old Faithful. Mention has frequently been made of the luxuriant vegetation, particularly of grass, of the park. The countries surrounding the park are more or less sterile from lack of rain-fall. The difference is no doubt due to the large amount of moisture given off by the gey-

sers and hot springs. This, condensed by the cold mountain ranges surrounding the park, falls in the form of dew and rain, giving to this region an excess of moisture above the less favored surrounding country. It would be impossible to ascertain within any reasonable degree of accuracy the exact surface of boiling water in this region but if all the geysers, pools, springs, and vents were collected in one body, with their present surface, they would certainly aggregate no less than 5 square miles of boiling water, or within a fraction of 140,000,000 superficial feet. At the rate at which boiling water evaporates, this extent of boiling surface must necessarily give off an immense amount of moisture, and this must have great influence upon the contiguous territory. Scarcely had we settled ourselves in our tents when we were surprised by the arrival of General A. McD. McCook, who with a party had come into the park by the way of Beaver Cañon Station, on the Utah Northern Railroad. This party consisted of his sister, Mrs. Curtis, and her husband, Dr. Curtis, his daughter and Miss Phillips, and Mr. and Mrs. Yerbe, of Salt Lake City. They were three days out from Beaver Cañon Station, to which point they had come by rail from Salt Lake City. They pitched their camp close by.

July 13.—The morning dawned clear and beautiful. McCook and his party were off early for the Grand Cañon and Falls, intending to make the rounds of the park in four days. The night had been unusually cold, producing thick ice, and the Chief Justice had suffered from it. He was so self-denying that he would not disturb any one by calling for assistance. Dr. McGuire, joined by Dr. Curtis, advised that he should not pursue the journey further, and he reluctantly consented to give up the remainder of the trip. After breaking camp we proceeded down the East Fork, fording it several times. The mountains close in and a skirt of timber intervenes. Emerging from the latter we came out upon the Lower Geyser Basin, a valley of irregular shape, but in general dimension about 8 miles in diameter. Here we met General Sherman, who had just returned from his visit to the Upper Geyser Basin. He at once decided to take the Chief Justice to Marshall's, a small place of entertainment close by, there to give him during the next two or three days the rest which he so much required, preparatory to starting for the Northern Pacific Railroad, on his way home. The remainder of our party continued on to the Upper Geyser Basin, distant from the Lower some 8 or 10 miles. In proceeding we diverged from the main road to look at the springs and geysers of the Lower Basin. These were the most wonderful yet seen by us, but were soon to be dwarfed in importance by those we shortly after met with in the Upper Basin. In this group there is but little active geyser action going on, but there is an abundance of boiling springs and pools. The most curious features are the pools of boiling mud, called, from their variety of colors, the "Paint Pots." They cover a half acre or so of ground, all united in one mass, but still distinct, each with its own colored mud, puffing and sputtering in the most industrious manner. The mud is without perceptible grit.

The road from the Lower to the Upper Basin follows the West Fork of the Madison, which has to be forded several times. It is quite a river, fordable only at moderate stages of water. Most of the way is through woods and over rocky places. Half way up from the Lower to the Upper Basin is Hell's Half Acre, a place worthy of its significant name. It is a plateau composed of a bare white mass of hard, shaly geyser deposit, a mile or so long by half a mile wide. The river washes one side of it, where it rounds down quite steeply to the water's edge. Over this bluff streams of hot water are constantly flowing. On the

summit of this geyserite field is a huge pool of scalding hot water, 300 or 400 yards long by about half that in width. From the edges of this lake the hot water flows off in every direction down a gentle slope, finding its way to the river. The surface of this pool is about 50 feet above the river, and its nearest edge about 200 yards back from the river. Between the pool and the river is Hell's Half Acre itself. This is a pool covering about half an acre, inclosed in a depression some 30 feet deep. The lower side next to the river is somewhat broken away, and all around the shaly geyser rock is giving way, huge masses caving down until it looks dangerous to approach the edge. The center of the pool is in the most violent state of boiling, heaving up in great billows. At irregular and rare intervals the whole pool is said to go up in one gigantic geyser, rising to a height of over 400 feet. The water flowing into the river raises it a foot or more, and makes it too hot for fording for several miles below. This geyser pool is evidently making its way rapidly up to the larger and higher pool; and when the break between the narrow strip separating the two finally takes place, there will probably be a commotion of hot elements rarely witnessed of late on this planet.

A mile or so above Hell's Half Acre we came to other hot springs, the commencement of the Upper Basin group, and from this on for about 4 miles the whole valley is honey-combed with springs and geysers of every size, shape, and condition of activity. The principal of these geysers, in the order in which they are approached from below, are the Fan, Riverside, Grotto, Giant, Pyramid, Splendid, Grand, Saw-mill, Castle, Bear and Cubs, Bath-tub, Giantess, Bee-hive, and last but most interesting, Old Faithful. Within a couple of hundred yards of the latter, on a beautiful knoll shaded with pines, we pitched our camp and composed ourselves to the agreeable task of looking out upon this *wonder land*. The river was about 300 yards in front of us; on each side of it were the geysers, somewhat in groups. Each group is in extent like a large plantation of grayish-white geyserite, hard but shaly. Over these areas swell up mamelons resembling in their gentle rotundity the breasts of huge Amazons. On the summits of these are the pools and geyser craters discharging the waters that have deposited the silica building up these rounded hillocks. The craters of the geysers usually have a curbing projecting above the swelling mass, forming in fair proportion a nipple to the mamelon. This is precisely the appearance of Old Faithful. The mamelons and craters are all constructed, by the geysers themselves, of the grayish-white silica, or geyserite, deposited by the cooling of the water; the process is very gradual and slow. The vents of the craters vary in size from a few inches to 20 or 30 feet in diameter, and are all incrusted with various forms of bead, coral, and sponge work of solid silica. When the geysers are not in operation (usually called going off) the craters are simply pools of hot clear water, sometimes boiling violently and sometimes quiet and placid. When quiet the water has a surpassing clearness with a deep azure hue, contrasting finely with the light gray of the silica. Looking down through the transparent depth the interior of the crater is seen, a cavern of indescribable beauty.

The springs or pools differ from the geysers in not "going off." Sometimes, however, they are agitated almost to an explosive degree. Those not in ebullition can be looked down into, and present the same cavernous appearance just mentioned for the geysers. Sometimes a pool will be entirely quiet, when all of a sudden it breaks out in some part and the water is lashed up as though two great monsters were bat-

tling beneath; then subsiding at this point it breaks out in the same manner at another. The springs occupy the summits of mamelons built up from geyserite deposit similar to the geysers, but do not have a curbed crater, only a very slight rim around the edge, over which the water flows, depositing silica and gradually but very slowly raising the pool to a higher level.

Thermal force does not appear to be diminishing, but is evidently changing its place of action. In every direction are to be seen the remains of ancient geysers and springs, and in the vicinity of those now living the hot water in flowing down has deadened forests of trees still standing, and is gradually building up a bed of geyserite around their trunks. When the thermal action ceases the geyser material rapidly disintegrates and affords soil and footing for a growth of vegetation.

After getting to our camp we did not have to wait long before we were gratified with a performance from Old Faithful. A roaring sound, like the letting off of steam from a boat, attracted our attention, and we saw a clear, straight shaft of water rising with a succession of rapid impulses until it gained an altitude of over 100 feet, probably 150 feet; clouds of steam, towering far above and spreading out, drifted away before the wind. This superb column maintained its height for full five minutes, all the time keeping up a roaring sound, and then with some spasmodic efforts to check its fall sank down and disappeared in the crater. This crater is of irregular form, about 3 feet wide by 8 or 10 long. The water disappears quite out of sight, but all the time there is a sepulchral roaring going on below. There are traces showing that the crater has been much larger, and that it is gradually growing less by the deposit of silica within the orifice. Within a hundred yards of Old Faithful are the remains of extinct craters, perhaps as grand in their day as Old Faithful himself, but which have gradually closed up, a fresh one breaking out as an old one ceases to act. This in time will be the fate of Old Faithful, and, in fact, of all. The theory of geyser action, first announced by Professor Bunson, now generally accepted, fully accounts for the phenomena attending eruptions. The application of this theory to the geysers of the Yellowstone Park has been given to the public by Surg. W. H. Farwood, U. S. Army.

In precisely sixty-four minutes Old Faithful again blew off, exhibiting precisely as before. Sixty-four minutes is the period of this remarkable geyser, varying from this time scarcely a minute. This regularity gives it the name of Faithful. The other geysers operate in the same general manner, but at irregular intervals; some have several hours, some several days, while others have weeks between eruptions. The most beautiful one, however, is the Bee-hive, the crater of which resembles the curbing around a country well. It is circular, about 6 feet in diameter at the bottom, gradually tapering; about 4 feet high, with a vent some 3 feet in diameter. We had the pleasure of seeing it go off, shooting up a stream of water to the height of 150 feet. The Grand is a caldron about 30 feet long by 15 wide, in the most violent state of boiling, tossing the water into waves like the whirlpool of Niagara. On one side of the caldron is a jet constantly throwing up a stream to the height of 20 or 30 feet, accompanied by huge volumes of steam. We were gratified by seeing this monster go off; in fact during our brief stay we saw nearly all of them in action. No adequate description of this *wonder land* can be given within the brief limits to which this account must be confined.

July 14.—During the night, punctual to his appointed intervals, we heard Old Faithful blow off. The sky was clear, and by the light of the

full moon the exhibition was as grand as by daylight. In the morning General Sherman came up from Marshall's, bringing the glad tidings that the Chief Justice was easier. General McCook and party also arrived. Quite a number of other excursion parties had also arrived, and several camps were in sight around us. We spent the day in riding and walking around, examining, admiring, and wondering. At every turn new surprises burst upon us.

July 15.—This morning we broke camp and moved down to the Lower Basin, and crossing the Madison near the junction of the forks, encamped near the National Park House, an hostlery kept by G. W. Marshall. There we found the Chief Justice sufficiently recovered by rest to undertake the journey back to the Northern Pacific Railroad, the route he proposed to take home.

Marshall's house is a good, hewed log, two-story building of several rooms, with numerous out-houses, all showing industry and thrift on the part of the proprietor and his energetic wife. They had a progeny which, for want of another name, might be called legion. It is a fact, observed in many instances during our journeying, that the more remote and inaccessible the place the greater in number are the offspring of the human inhabitants. Marshall's place has a most picturesque outlook over the Lower Geyser Basin, and with its warm baths and excellent food is a most comfortable place for tourists. Marshall informed us that he had spent two winters in this place. The winters, he says, are very severe, with deep snows, but however severe the Madison and other streams into which flow the hot waters never freeze over. At such times these streams are literally covered with wild water fowl. A mile or so from Marshall's are several neat and comfortable hewed log houses, the residence of one of the assistant park keepers. One of these buildings is a blacksmith shop, for repairs required by the traveling public.

In the afternoon our party separated, the Chief Justice and Senator Edmunds starting for their homes in the East, and our cavalry escort and pack-train back to Fort Ellis. General Terry having experienced great distress in breathing, by reason of the great altitude, returned also. They all started together, intending to make camp for the night on Gibbon's Fork. Our party from this on consisted of General Sherman, Justice Gray, Colonel Dodge, and myself. We retained two ambulances, three wagons, and a sergeant, and ten infantry men to do guard and police duty in camp. We had a couple of Chinamen for cooks, and a good camp outfit. The objective point of our route from here was Missoula, on the Northern Pacific Railroad, near the mouth of the Bitter Root River. From our present camp to Beaver Cañon station, on the Utah Northern, we traveled in company with General McCook and party.

July 16.—Last night was very cold; at sunrise this morning the thermometer stood at 22°, and ice formed so thick in our buckets that we had to break it with stones. Vegetation does not seem to suffer from these frosts and freezes; the effect on grass and flowers being apparently but that of dew. We took the road leading westward over the mountain directly in rear of Marshall's house. This road is generally known as the Norris road, after Norris, the park superintendent, who constructed it. For a road newly cut and through dense timber this is a very good one. Norris, considering the very small amount of money at his disposal, seems to have been a good road builder. The side of the mountain next to Marshall's is steep, and for a couple of miles the road winds around and is steep also; after that, for about 7 miles,

the ascent is gradual until the summit is reached. The valley of the Madison here bursts into view, presenting a most magnificent panorama. The mountains of the Continental Divide bound it to the westward. The descent to the valley is steep, but the road fairly good. About a mile from the foot of the descent we came to the Madison, where there is a log house, called Riverside station, 14 miles from our starting-place of the morning. The road does not cross the Madison but continues over a sandy plateau of scrubby pines to near the South Fork, when it descends over beautifully rolling prairie, and crossing the South Fork upon a good bridge, gradually ascends again over grassy hills to Tahgee Pass, through which we passed and found ourselves on waters flowing into the Pacific. We had indeed crossed the Continental Divide, but by a route so easy we hardly knew when we made the transit. About a mile beyond the pass we came to a swift running creek, upon which we made our camp, distance 32 miles. The scenery about here, though not particularly grand, is exceedingly beautiful. The sky in these high altitudes is of a peculiar depth of blue, and the clouds forming around the tops of the snow-peaked mountains are curiously billowy and fluffy. Grass is abundant, and there is no scarcity of wood. A strong wind from the west evidently prevails here during much of the year, for it is observable that the trees are quite inclined. The creek upon which we encamped is a tributary of the Heavy Fork of Snake River. As we could discover no name for it we called it the Tahgee.

July 17.—Our road followed down the Tahgee for about 2 miles when it brought us into the valley of Henry Lake, a sheet of water which we could faintly see in the distance to the west. The valley is low and meadow-like, about 20 miles long by 10 in width, surrounded on all sides, except the south, by high mountains. The lake is at the upper end of the valley, and appears to be of irregular form, some 6 or 8 miles long, with low grassy and perhaps swampy margin. We soon came upon its outlet—Henry's Fork—a clear stream about 20 yards wide, meandering, with low banks lined with scrub willows, through a meadow-like valley. Our route for the first 12 miles was almost due south, much of it over marshy land. Then we crossed Henry's Fork and ascended upon a low table-land, gravelly, and covered with scrub pine. Our course here turned to the west, and we soon after came to Rea's station, a kind of tavern kept by a woman of that name, a widow of one of the war soldiers who had campaigned under the General. This place of entertainment stands in the wilderness on the banks of Henry's Fork, and is intended to be a station for the line of stages now in process of being put on this route from Beaver Cañon to the Park. Everything about it is new and backwoods like; the buildings are a combination of log-cabin and tents, but rude as they are, many a weary traveler will no doubt hail it with joy, and, if mosquito-proof, find rest beneath its humble shelter. Henry's Fork is here quite a river, and full of the finest trout. These are taken at night by spearing, which is done by the light of a kerosene flame from the bow of a boat. The fish are attracted by the light and are transfixed by a six-pronged grange. About a mile below Rea's station the road crosses the river, which here spreads out to about 100 yards. The ford has a hard, gravelly bottom, without rocks or holes, and with easy banks on each side. The river was now on our right or north side. The road continues through scrubby pines and woods, with here and there an opening covered with sage brush. The soil is generally poor and sandy. About 10 miles from Rea's we again forded the river to the north side. Here we halted for a short time, during which the justice and Dodge caught a mess of fine trout.

They pronounced it the best fishing they had ever seen. A few miles below this point the river turns to the south, and, entering the mountains, disappeared from our view. Just before turning, it receives an affluent, called Shot-gun Creek, a beautiful stream about 20 yards wide. We were informed that it had its source in a spring only 4 or 5 miles distant. From the last ford our course lay westward over a rolling, gravelly plateau, covered with sage brush and a scanty growth of grass. Below us to our left were flat meadow-lands, through which flowed small streams of such crookedness as to appear to be tangled in each other's loops.

Thirty-four miles from our starting-place of the morning we came to Sheridan, another stage station, on Sheridan Creek, a tributary of the Snake. Although but a small stream it is full of trout, and all hands went fishing. The trout of this Western country do not take the artificial fly with avidity; they want natural bait. Grasshoppers are the best, but at this season of the year are so young as to be difficult to catch. Horse-flies are good, and fortunately are abundant, in fact too abundant, for they are an almost intolerable pest, not only to horses, but to all other animals, and particularly so to man. Angle-worms are excellent bait, but as they are not to be found here naturally as in the East, many people raise them in pots and boxes, and thus have them convenient for their use. The most expert of our anglers complained that the trout of this Western country, although so beautiful and delicious, are clumsy at taking the bait; that although they strike with vigor, it is in an awkward country-like manner, entirely inferior to the more accomplished fish of the East. While in the valley of Henry's Lake we could see to the southward the tops of the Three Tetons, the great landmarks in olden times of trappers on the headwaters of the Green and Snake Rivers. We met also in the same valley large herds of cattle gradually grazing their way from Oregon to Montana; thence by the Yellowstone they reach Chicago and the Eastern markets. From what we afterwards saw of cattle driving this is a great route for such trade.

July 18.—Our course during this day continued westward until it struck the Utah Northern, when it turned square to the north, following the railroad through the lower debouch of Beaver Cañon, about 3 miles, to the station, distant 35 miles from our camp of last night. Here we went into camp, and in the evening bid good-by to General McCook and party, who took cars for Salt Lake City. The first half of our day's travel had been over low prairies, one of which is Camas Prairie, the scene of one of the encounters which General Howard had in 1877 with Joseph's band of Nez Perces. Crossing over a low divide, separating the waters of the Snake from those of Beaver Creek, the road skirts the edges of foot-hills over lava beds and bowlders. The principal tributary of the Beaver crossed by us was the Rattlesnake Creek. During the day we met two herds of cattle of about 2,000 head each, like those of the day previous, on their way to Montana. One of the herds was composed almost entirely of cows and calves. We met also a small drove of horses on their way to be distributed for stocking the stage line over this route. The distance from Beaver Cañon station to the Lower Geyser Basin is 103 miles, over an easy road. Even by stage it is the best way of getting to the Park, for it leads at once to the chief objects of curiosity, and thereby saves time. A railroad no doubt will soon be constructed over this route, and, besides affording greater facilities to the public hungering to see the wonders of the Park, it will open for settlement the rich lands through which it passes.

July 19.—Leaving Beaver Cañon station, we followed the old Ban-

nock route over the low mountains, through which Beaver Creek breaks its way in a deep and narrow cañon. The railroad follows the cañon, a natural cut through basaltic rock just wide enough for the track. The summit of the mountain is about 14 miles from Beaver Cañon station. The road then descends to the small branches of Red Rock Creek, a tributary of the Jefferson, a fork of the Missouri. We had thus recrossed to the eastern side of the Continental Divide, and were again on the Atlantic slope. The route over which we were traveling was the old emigrant trail to Oregon, and over its weary miles had toiled thousands of pioneers, with their trains and families, in search of homes on the distant Columbia. Now it is almost untraveled; railroads have superseded it. Some of the old stage stations remain, and their dilapidated block-houses and loop-holed walls tell of when the Indian held bloody sway over this land. This was but a decade of years gone by, and there is scarcely a trace of him left. Civilization withered him up as flax is consumed by fire, and no one mourns his loss. Our road followed near the railway, which it crosses several times. A little beyond Spring Hill station we went into camp on Willow Creek, near its junction with the Beaver. Distance 29 miles. At Spring Hill is a round-house and repair shops. The country over which we had traveled during the day was dry and sterile, with but little grass or other vegetation, and no wood, except in gulches of the mountains a long way off. The day was hot and the atmosphere so hazy as to prevent our seeing the mountains until towards evening, when, a breeze springing up, they were revealed to us in all their grandeur. During the day we met a herd of cattle and passed a drove of "Cayuse" horses.

July 20.—Our road followed along the railroad down the level valley of Red Rock Creek. At Red Rock station, distant 22 miles from our starting-point of the morning, we halted for an hour. Here our road left the railroad and bearing off to the left 4 miles brought us to Horse Prairie, a considerable valley, watered by a creek of the same name. A good deal of the bottom land along this stream is fenced in for meadows. About 12 miles from Red Rock station we pitched our camp, near the ranch of Mart. Barrett. Near our camp was the ranch of a Mr. Perry, from Auburn, N. Y., whose business here is cattle raising and dairying. He finds good market for his butter in the surrounding mining camps. The mining district of Lemhi is to the westward, and not far distant. There is also a little placer mining on the tributaries of the Beaver. The bottom lands produce good grass, among which is a species of wild red clover. Sage brush covers the uplands, but among it is a sprinkling of grass, affording good picking for stock. The rainfall is small and snows so light that animals range out the year round. Poles for building, fencing, and for fuel are obtained in the mountains some distance off. Mr. Barrett is building a fine large brick house, the first we have seen since leaving Dakota. It is certainly a curiosity in this remote region. He is the owner of 2,000 acres of good land, mostly fenced in, and is engaged in cattle and horse raising and dairying. He and his wife are from Michigan. Twenty years ago he started for Idaho, at the time of the mining excitement there, but becoming weary of the journey settled here, and had prospered, and prospering he proposed to spend here the remainder of his days.

July 21.—Continuing our journey for 12 miles we came to Bannock City, a decayed mining town, formerly the capital of Montana. There are still lingering around it a few inhabitants, apparently too poor to get away. It was at one time a lively place, and the numerous signs of banks, assay offices, "gold dust bought here," still clinging to the

decaying houses attest the business activity of the place in days not long gone by. A little placer mining is still done near here, but the glory of the place has departed. Bannock City is on the Grasshopper Creek, also a tributary of the Beaver. The road follows along the Grasshopper, which has a narrow valley, in which are occasional ranches and inclosed fields, principally meadows. The meadows of Horse Prairie and of the Grasshopper furnish hay for the winter feeding of stocks. During the summer the herds are driven over into the valley of the Big-hole for pasturage. After passing along the Grasshopper for several miles the road ascends the divide leading to the Bitter Root Valley. The ascent to the divide is about 5 miles, leading along the side of a mountain from which issue numerous springs, making the road in places very boggy. It was also very rough from bowlders. The crest of the divide is about 800 feet above the valley. It had been rounded off during the glacial period and the rocks carried to the south side, making the road rough, as before mentioned; the northern side, although steep, is free from bowlders. From the crest of the divide a magnificent view presents itself. The wide expanse of Big-hole Valley is below, while beyond is a long stretch of the Rocky Range capped with snow and rising directly from the valley, with but few intervening foot hills. Herds of cattle were seen on the plain; the same recently driven there for grazing from Horse Prairie and Grasshopper Valleys. After passing the divide some 3 miles we went into camp on a small trout stream, with good grass but no wood. Distance made, about 35 miles. During this day, and from this on, we saw broods of blue grouse, better known as *fool hens*, on account of their extreme stupidity. The young were at the age corresponding to spring chickens, and were a great addition to the variety of our mess. Although good fat beef was around us on the hoof in every direction, we could get none for our table. Cattle trade seems to be on a boom; herds, including cows, calves, and bulls, sell for $30 per head.

July 22.—After proceeding a few miles we came to the main branch of Big-hole Creek, the valley of which we followed down about 30 miles to Noys's ranch, where we crossed the stream at a good ford and went into camp in a meadow of tall grass on the western side. About 10 miles from our last camp we passed a warm spring, and from thence on the road followed the higher and dryer part of the eastern side of the valley. The road, never a very good one, is now but little used, and is exceedingly lumpy from the many gopher and badger mounds made by these industrious animals. We saw several of the badgers, alarmed by us, waddling off to their burrows, but, before disappearing in their holes, taking a momentary glimpse of us in the most quizzical manner. Mr. Noys is from Maine, and lives here with his wife and children and two brothers. About 8 miles above he has a neighbor, the only one we saw in the valley.

July 23.—Our road, or what was left of it, for it was fast running out, led from Noys's ford westward over a high and dry plateau, about 12 miles, to Pioneer Creek, flowing along the foot of the mountains, limiting Big-hole Valley on its northwestern side. The plateau is intersected by numerous dry ravines, some running to the Big-hole, while others go to the Pioneer. Pioneer Creek, in this part of its course, follows a narrow valley between the bluffs of the plateau and the foot of the mountains. It is bordered with a thicket of dwarf willows, and it was here and among the willows that General Gibbon had his fight in 1877 with Joseph and his Nez Perces. Although Gibbon was worsted in the fight, and but for timely relief would have shared the fate of Custer, he

nevertheless gave the Nez Perces such a blow as to lead finally to their entire defeat and capture.

From this point the road or trail follows westward up a branch of Pioneer Creek, about 20 miles, to the summit of the mountain, when it pitches abruptly into Ross's Hole, the head of Bitter Root Valley. The ascent on this side is quite gradual. The road crosses and recrosses the creek a great number of times, and passes through numerous glade-like openings. The sides of the mountain are densely covered with timber. About 3 miles from the summit we encamped, and, until the coolness of evening drove them away, were tormented by gnats, mosquitoes, and horse-flies.

July 24.—The morning was very cold—thick ice in our buckets, and thermometer 25°. The road continues up the creek, which gradually becomes smaller, until finally near the summit it is lost entirely. From the summit we looked down into gorges drained by waters leading into the Pacific. This is our third crossing of the Continental Divide. The descent is very steep, but over a comparatively good road. The whole mountain is covered with pine forest. Towards the bottom we came to trees much larger than any we had yet seen, with glowing reddish-brown trunks. These are known as red pine. From this on to Puget Sound they occur quite profusely. A few miles from the foot of the mountain the road emerges into Ross's Hole—hole being the name given in this part of the country to circular valleys embracing the headwaters of streams, and surrounded by high mountains. The principal stream of this hole is Ross's Creek, which, upon leaving the hole, enters a cañon about 13 miles long. The road follows the stream, crossing it a number of times at fords full of bowlders. The road, originally built and used for mining purposes, had become almost impassable from disuse. The cañon is heavily timbered with the red pine before mentioned.

About a mile after emerging from the cañon we came to Edwards's ranch, not much of a ranch, but still enough to be, as it is, a landmark. (Everybody knows of Edwards's ranch.) Opposite this ranch the east and west forks of the Bitter Root unite and from this on the stream is quite a river, flowing with great swiftness over a bowlder bed. About a mile below Edwards's the road crosses the river to the west side at a ford passable only at moderate stages of water. Immediately after crossing we went into camp upon the brink of the river bank, the most comfortable camp of our trip. The Bitter Root Mountains were directly in our rear, and as the sun was setting behind them their serrated crests presented a magnificent appearance. This was the last view we had of them; from here on smoke arising from burning forests so filled the atmosphere as to cut off all distant views, depriving us of one of the chief pleasures attending a journey through a region so rich in mountain scenery.

In passing into the Bitter Root Valley we perceived evidence of a great change of climate. At Edwards's we saw tomatoes, corn, and other vegetables, impossible to raise where frost occurs nearly every night of the year.

July 25.—The road continues down the west side of the river for 10 miles, and then crosses by a ford, wide, deep, and exceedingly rough with bowlders and steep banks.

About a mile below the ford we came to Como, so named from a beautiful lake in the mountain near by. It is nothing, however, but a ranch owned by a Mr. Harlen, from Columbiana County, Ohio. He had brought with him to this out-of-the-way place the taste and thrift of his native State, and was domiciled in a neat frame-house with a shingle roof,

around which was a thrifty orchard and a garden full of currants, raspberries, and other fruits. He and his neatly dressed family were in the garden gathering berries, an offering of which they politely made to us. He informed us that this valley is peculiarly adapted to berries, particularly the currant.

Eight miles further on and we came to Skalkaho, a hamlet consisting of one small store and a half dozen shanties, except one house, which was a two-story frame. Small as the place is, it supports a school, at which we stopped for a few minutes, and found twenty-three children busy at their lessons. The teacher informed us he had forty on his rolls. A great deal of the land about Skalkaho is fenced in and under cultivation, irrigated from mountain streams. Immediately along the river the land is low and flat, producing heavy crops of hay.

Twelve miles below Skalkaho is Corvallis, a village with three small stores, a church, and quite a number of neat, private residences. Barber-poles and baby-carriages indicated that we were again within the limits of civilization. Six miles below Corvallis we went into camp on the place of Mr. Mitchell. Distance to-day 35 miles.

July 26.—Six miles further on we came to Stevensville, another village similar to Corvallis. At the upper edge of the town is Saint Mary's mission, established about 1843 by the pious and kindly hearted Father de Smet. It, with many others scattered with profusion through the Oregon country, was intended for the proselytism of the aborigines, and for a time was eminently successful. The Indians took to the forms of conversion with avidity. They thought it *big medicine*. The mission, although in a feeble way, is yet in operation. On the opposite side of the town from the mission is Fort Owen, an old adobe structure, originally half fort and half trading post, built by Owen, an Indian trader, about thirty years ago. A little way below this the road crosses the river to the west side on a substantial trestle bridge, and continuing on down recrosses on another bridge about 5 miles above Fort Missoula.

The Bitter Root is a fine valley, and capable of a much greater population than it now has. The healthy appearance of the inhabitants and the absence of doctors' signs about the towns attest the salubrity of its climate. It is now within easy reach of the railroad at Missoula.

Upon arriving at Fort Missoula we went into camp; the General was received with the customary salute and inspected the post. Arrangements were made for returning our outfit of ambulances, wagons, camp equipage, and escort to Fort Ellis' where they belonged. From here to Cœur d'Alène, 230 miles, we are to travel on the Northern Pacific Railroad. The post of Missoula is located on a level, treeless plateau within the fork of the Bitter Root and Hell Gate Rivers. These streams form the Missoula, which further down unites with the Jocko, forming the Clark's Fork of the Columbia. The post is on a bluff overlooking the valley of the Bitter Root. It is a well laid out and comfortably built post, with a garrison of four companies of the Third Infantry, under command of Major Jordan.

July 27.—This morning we did not strike our tents, but, packing up our traveling effects, left our camp, and crossing the level and dusty plain 5 miles to the town of Missoula, took possession of our seats in the car. A couple of hours of spare time afforded us opportunity for looking about the place. It is a town of great business activity, combined, as we were informed, with an unusual amount of wickedness of every variety. It is prettily situated on a plateau facing Hell Gate River. South of it, within rifle shot, is the entrance to the great Hell Gate Cañon, the existence of which made the construction of the Northern

Pacific Railroad a possibility. The streets, decorated with worn-out cards from the saloons, were picturesque with roughly clad miners. Indians with their squaws and papooses, flashily dressed gamblers, and the ubiquitous Chinaman. Less conspicuous were more worthy citizens, many of whom paid their respects to the General at the store of Mr. Baldwin, a pioneer of the place of twenty-two years' standing. At 9 a. m. the train started, and 20 miles from Missoula passed over the great bridge spanning the Morentz Gulch. This structure is 226 feet high and 868 long. Is is by a few feet the highest bridge in the United States, and is perhaps the highest in the world. It is built on eight wooden towers, upon which rest wooden trusses supporting the railroad track. Soon after passing this we entered forests of firs, pines, and tamaracks, which, as we proceeded down the Columbia and around Pend d'Oreille Lake, became almost tropical in their luxuriance. The road winds around the mountains and enters the valley of the Jocko, passing by the agency of the Flatheads. Here we saw a great many Indians, assembled on business with their agent. The Flathead Agency is under the control of the Catholic Church, which here supports a Jesuit mission and has converted all of the inhabitants to at least a nominal adhesion to its faith. At the mission are excellent schools for girls and boys, a church, a convent, and a printing office. The principal of the mission, the Reverend Bishop ——, boarded our train, and, traveling with us for several miles, had a pleasant conversation with the General. At Horse Plains we dined in a canvas shanty, one of a number constituting a town newly formed upon a stumpy patch of ground cut from the dense forest surrounding it. On our train was Chief Moses returning from Washington under charge of Captain Baldwin. With him was Tanasket, head man of the Colville Indians.

Although the road was in good running condition it was nevertheless unfinished and gangs of Chinamen were at work; the woods appeared to swarm with them, and the road was lined with their squalid camps. In the evening after the mosquitoes had assumed sway in the land, it was interesting to witness the activity exercised by these Asiatics in protecting their yellow legs and shaven heads from the ravenous attacks of these insects. The forests are so dense as to preclude settlement, except at great cost of labor, and we saw but few openings until we reached Lake Pend d'Oreille, where are some sawmills, and upon the lake a steamer. For a great portion of the way the forests were on fire, requiring a strong force and great vigilance to protect the railroad. A broad swath has to be cut through the forest to preserve the road from fire and falling timber. Some of the scenery along this part of the Columbia is surpassingly picturesque. We passed around the irregular shores of Lake Pend d'Oreille just at sunset and the views were unspeakably beautiful. We reached Rathdrum, the station for Fort Cœur d'Alène, about 10 p. m., and were met by General Wheaton with conveyances to take us to his post. The people of the new little town of Rathdrum had got wind of the expected arrival of General Sherman, and had a huge bonfire ablaze, and with anvils were firing a salute in his honor. From Rathdrum to the post, a distance of 10 miles, the road constructed by the troops passes out of the forest across Spokane Plains, and soon after re-entering the woods reaches the post. Here we found a most comfortable camp pitched for us on the shore of the lake.

July 28.—Daylight this morning afforded us an opportunity of seeing what manner of place Fort Cœur d'Alène is. We found it the most delightful site for a military post that heart can desire. It is situated

on the angle of land lying between the shores of the lake and the Spokane River, the outlet of the lake. The lake is picturesque with islands, headlands, and coves; the river is broad, clear, and tranquil; all around are splendid forests. The land upon which the post stands is almost level and only a few feet above the water of the lake. The soil, of coarse, dark sand, is dry. The buildings surround three sides of a large rectangle; the side next the lake, being open, permits a fine view across the water.

The post has ample accommodation for its present garrison, consisting of the headquarters and five companies of the Second Infantry and a troop of the First Cavalry. The post is provided with a steam sawmill and on the lake is a steamer of considerable size, built principally by the labor of soldiers. This steamer is used in towing scows, carrying hay, and other supplies from distant parts of the lake and its chief affluents, Saint Josephs and Cœur d'Alène Rivers. The lake and streams emptying into it are full of the finest trout, and the surrounding forests afford good hunting.

Just outside the limits of the post, looking upon the lake, is a neat and comfortable hotel, a summer resort for people residing in the malarious regions of the lower Columbia. The General was received with the proper salute, and during our stay made a thorough inspection of the place He had selected this identical spot for the post when, in 1877, he passed through here, traveling over the disused Mullan road. It was then in the heart of the wilderness; now it has the railroad running near it, and the country around is rapidly settling up.

July 29, 30, and 31.—Remained in camp making preparations for the continuation of our journey and enjoying the hospitalities of the post. In the meanwhile, General Miles, commanding this department, arrived, accompanied by Surgeon Moore, medical director, and Mr. Saurin, First Secretary of the British Legation at Washington. These gentlemen are to accompany us until we arrive at Vancouver.

Our next objective point is Hope, on Fraser River, in British Columbia.

August 1.—This morning Captain and Brevet Major Jackson started with our escort, his Troop B, First Cavalry, and the pack train for Old Fort Colville, on the Columbia, where we are to make the crossing.

August 2.—This morning we left our delightful camp on the Cœur d'Alène Lake, and following the general direction of the Spokane River, pitched our tents in the edge of the town of Spokane Falls, on a bluff overlooking the magnificent falls. Until we reach the crossing of the Columbia, our traveling is done in ambulances and our camp outfit is carried in wagons.

Soon after leaving Cœur d'Alene, the road emerges from the forest and crosses Spokane Plains, high, dry, rolling lands, with few settlements, but well clothed with grass. Eleven miles down the river, the road crosses to the south side upon a good trestle bridge. About 2 miles below the bridge, on a slender neck between the road and river, we passed the "Bone-yard" so named from piles of bones, the remains of Indian ponies captured and killed in 1858, by Colonel Wright, when at war with the Spokanes. The road was excellent, until we reached within 2 or 3 miles of the falls, where it passes over some very rough lava formation. The railroad crosses the Spokane River above the town of Spokane Falls. This is an ambitious town of a few years' growth, containing an estimated population of 3,000 persons. The ambition of the place rests upon the falls, a superb water-power, and a superb picture, too. The river, first dividing into three channels, makes three separate falls of about 30 feet, and then uniting

its transparent green waters, plunges down a sheer descent of 60 feet. Some small milling and wood-sawing industries have grown up here, and, in grinding the product of the new wheat region of Eastern Washington, the place soon hopes to become the Minneapolis of the Pacific Coast. There is now a very large flouring mill in process of construction, and the place boasts of two banks, two papers, and a number of good hotels. The town is neat, clean, and orderly beyond most western places. It is the center of a rich farming and stock-raising country, which is rapidly settling up with a good class of immigrants. A committee had waited on the General, requesting him to meet the citizens of the place, which he did in the evening at a public hall, and was enthusiastically received.

August 3.—This morning, early, General Sherman, General Miles, and myself, started in a special ambulance for Fort Spokane, distant 65 miles. The remainder of our party continued on the main road leading to Colville. Our plan was to go to Fort Spokane to-day, and to-morrow, by taking a trail across mountains, intercept our party on the main road. The road for most of the distance to Fort Spokane is over a high, rolling prairie, generally smooth, but occasionally rough with basaltic outcrops. Sixteen miles from Spokane Falls, we came to the village of Deep Creek, consisting of a flouring mill, store, tavern, blacksmith shop, and a dozen dwelling-houses. The blacksmith was firing a salute with his anvil. The prairie all round was staked out, indicating the future streets, avenues, and public squares of a great city.

At Courtright's ranch, distant from Spokane Falls 32 miles, we breakfasted, and taking a relay of horses proceeded on over a fertile country rapidly settling up. These settlers in inclosing their fields have no respect for the road, but following the section lines with their fences force the road from its old and beaten track around by the cardinal points. The new part of the road thus made, being unworked, is very rough, and to some extent longer. The country as we approach Fort Spokane becomes more rolling—in fact quite hilly—and gradually rises until within a mile or so of the post, where it suddenly breaks off in a steep descent of almost 1,000 feet to the river. Down this descent the road winds to the post, which is situated on a plateau at the junction of the Spokane with the Columbia. The plateau is a level bench about 400 feet above the river, and is inclosed by high hills which, circling around to the river above and below, restrict the plain to a length of about three miles, and a width of about three-fourths of a mile. The country here is curiously terraced; on the opposite side of the Spokane six distinct steps can be counted. The site of the post is on one of these terraces. Another, still lower, is next the river, and one several hundred feet above, has a spring affording a copious supply of water to the post. It also furnishes water for the steam saw-mill of the post, which is located on this terrace. A beautiful birds-eye view of the post is obtained from this point. The post at present consists of three barracks, six buildings for officers' quarters, a hospital, a building for quartermaster and commissary stores, stables, bake-house, and other buildings, all frame, and neatly and conveniently constructed. Some of them, however, were at the time of our visit unfinished, and more are required to accommodate the garrison without crowding. The garrison consists of four companies of the Second Infantry, and troop F of the First Cavalry, all under command of Lieutenant-Colonel Merriam. The soil upon which the post stands is fine and light, overlying a deep stratum of gravel. The post has the reputation of being hot in summer and cold in winter, and exceedingly dusty. To the latter we can testify, for

in the evening of our arrival a squall came up which raised such clouds of dust as to make it almost impossible to tell where the solid ground ended and the dust in the air commenced. At a short distance below the post are the remains of a bridge over the Spokane. A bridge here is of importance, as it gives access to the country lying in the direction of the Colville and Spokane Indian Reservations. The Columbia is seen from the post at the point where the Spokane enters it. The terrace formation before mentioned is due no doubt to a lake formerly occupying all this country. At that epoch it was bounded on one side by the Cascade range of mountains, and in bursting at successive periods through this range at the Dalles left deposits in the form of successive benches. In other parts of our journey, further on, we saw a great deal of this singular geological formation.

August 4.—At 9 o'clock this morning we started on horseback to join our party on the road to Colville, accompanied by a detachment of cavalry under Lieutenant Bomus. We at first proceeded up the left bank of the Spokane for about 3 miles, and then descending from the plateau by a winding and precipitous trail, crossed the river—the horses by swimming and we in a small skiff. We then proceeded up the right bank for 5 miles, passing on the way a small Indian settlement, at which were several hundred acres of land under cultivation, mostly in oats. Turning squarely off to the left, we then followed a blind trail over the mountains. This trail gradually grew into a kind of road, which continued to improve until finally it became good enough for any purpose. It had been cut out a year before by a company of troops, but from disuse is fast growing up with bushes. The mountains ascending from the river were very steep, but after that, rolling and heavily covered with pine and tamarack. Owing to the dryness of the season but little water was met with on the route, although there was an abundance of dry courses, which in ordinary times are full. The descent from the mountain was gradual, and we soon came to the head of a small prairie (one of the numerous Camas prairies of this part of the country), low, flat and covered with luxuriant grass. Soon after entering this prairie we came to a camp prepared for us, and here was an ambulance and wagon sent across to meet us. Distance from Fort Spokane 27 miles. Two or three squatters had settled on the prairie and were engaged in putting up hay, with a view to wintering stock. The stock grazes during most of the year on the hills and mountains, but during the severe weather of winter has to be fed, and these men take it at so much per head per month.

August 5.—Lieutenant Bomus and his detachment of cavalry took the trail back to Fort Spokane, while we in the ambulance proceeded on, and in 7 miles struck the Colville road, 16 miles from Hain's ranch and 12 from Chewallah. Soon after coming upon the road we rejoined our main party. Following the Colville road, which is a good one, we traversed Long Prairie, a beautiful strip of country 5 or 6 miles long by 1 broad, fenced in and under good cultivation, oats, wheat, and hay being the chief crops. Passing from this prairie through a strip of woods we entered the valley of the Colville. This is a fine, rich valley, well settled and well cultivated. Most of the settlers are old employés of the Hudson's Bay Company, who, when in 1846 the privilege of trading over this territory was withdrawn from that company, remained as farmers. These men, after the manner of most of the Hudson's Bay Company people, had taken to themselves wives from among the Indians, and their piebald descendants swarmed about their habitations. In this valley are many full-blood Indians belonging to the Colville

Reservation lying to the west of the Columbia. Although so far away from the reservation, the agent for these Indians resides in this valley, at Chewallah. Most of the Indians live in lodges, in aboriginal style, and hire themselves out as farm laborers. A few of them have houses of their own and land to cultivate, and more would live in the same manner but for the insecurity of their titles. They do not understand the mode of securing homesteads; the white man does, and comes along with his title complete from the land office, and the Indian has to quit his improvements and leave. Neither do Indians understand taxation, and not understanding it, it is irrepressibly obnoxious to him. Our British neighbors across the border understand the management of the Indian better, and not only secure to him his homestead but remit his taxes, and thus avoid the troubles always surrounding the Indian question with us. At Chewallah, or Brown's, as it is better known, 28 miles from Hain's, we encamped. The Catholics have a mission here, and as it was Sunday, and the Indians, all pious, they were out in force, in all their gorgousness of scarlet blankets and fancy calico. After church the young bucks showed off by riding furiously around. The young squaws, in bright handkerchiefs and many beads, made themselves attractive to their beaux. Chewallah consists of a store, blacksmith shop, and post-office. On the road to-day we passed a steam launch, which was being transported on a heavy wagon to the Columbia, to be used in the exploration of that river above the Upper Dalles. The exploration is in the interest of a projected railroad, to branch off from the Northern Pacific and penetrate the Kootenay country of British Columbia. This launch is probably the pioneer of many steamers soon to ply upon the waters of the Upper Columbia. The Colville valley has great reputation for healthfulness. One of the oldest white inhabitants informed us that he had never known of the death of a white person in the valley. Not so, however, with the Indians. Their graveyards are well filled, and we observed among them many new graves, all marked with the cross, the symbol of the faith to which they had been converted. From some mysterious cause the Indian naturally disappears upon the approach of the white man.

August 6.—Continued on through the Colville Valley, the cultivated portion of which is about 3 miles wide. Surrounding the valley are mountains. About 23 miles from Chewallah we came to Colville, a village, which, besides boasting of a brewery, contains a store or two, a blacksmith shop, and a dozen or so of dwellings. Turning to the right we followed the road leading over a low divide to the waters of Mill Creek, upon which is situated the post of Fort Colville, 3 miles from the village just mentioned. Passing through and beyond the post we encamped on the creek. The garrison of the post was withdrawn about nine months before. The property left behind is in charge of an agent. The post is very prettily situated on a small plain, surrounded by mountains on three sides. The mountains and hills around are covered with fine timber. The post was established in 1859 to guard against the Indians, who were very hostile, having defeated Steptoe, near the Spokane River, the previous year. The post is built of hewn logs, the buildings being arranged around four sides of a square parade. The post had accommodations for four companies. The buildings, particularly the barracks, are now quite dilapidated. Near the post, on Mill Creek, is a small village of whisky shops, such as always spring up in the vicinity of Western posts.

August 7.—We returned, by the way we came, to the village of Colville, and from there continued on down the valley. In 10 miles we

reached the mission of Saint Joseph Regis, where the General received a pressing invitation to enter and inspect the institution. We were courteously received by Father Caruana and Sister Bernardina, heads, respectively, of the boys' and girls' departments. The institution is exclusively for the instruction of Indian youths, for the maintenance of each of whom the United States Government pays $100 a year. The mission owns a section of land, a great portion of which is under splendid cultivation. The buildings are commodious, substantial, and neat. It was the season of summer vacation, and the boys, 50 in number, were absent, and so likewise the girls (also about 50) except 20, who, expecting us, had been arrayed in all their finery, neat, clean, and civilized. They were paraded in two semi-circular lines, the smallest in front, and received us with songs of greeting, accompanied by music on a parlor organ. After the songs little speeches of welcome were pronounced in succession by several of the children, to which the General replied in appropriate words. The children ranged from four to fifteen years of age; some of them were half-breeds. After the singing one bright-eyed little girl, dressed as a beggar child, rehearsed a piece in the most effective and touching manner. Everything about the establishment is neat, orderly, and systematic. The girls are taught housework and the boys farming. The sisters in charge are Canadian French from Montreal, and the children had acquired most perfectly their peculiar accent of broken English.

Leaving the mission we traveled on about 6 miles, when we came to Old Fort Colville, situated on the east bank of the Columbia, about 30 miles south of the northern boundary line of the United States, and 3 miles above Kettle Falls. This post was built by the British in 1858, for the accommodation of their commissioners, surveyors, &c., then running the boundary line between the United States and the British Possessions on the north. The commissioners on the part of the United States occupied Fort Colville, the place at which we stopped last night. The former, known as Old Fort Colville, after being occupied a couple of winters by the boundary commission, passed into the hands of Indian traders, two of whom, Mr. Brown and a Mr. Openheimer, still carry on business here. The buildings are solidly constructed of logs, but now considerably decayed and dilapidated. The Columbia here is a swift, clear stream, 480 yards wide. It is crossed by means of scows propelled with oars. Jackson's troop of cavalry and the pack-train had arrived the day before and were encamped on the opposite bank. Leaving our wheeled vehicles to return to Cœur d'Alène, we also crossed and went into camp by the side of Jackson. From here on to the Fraser River, a distance of 222 miles, we have saddle-horses and pack-mules only.

The Kettle Falls of the Columbia, just below us, were from time immemorial a famous salmon fishing place for Indians. It is, however, no longer so; the salmon have become scarce by reason of the great numbers taken for the canneries near the mouth of the river.

August 7.—Our party, as organized for the march to Fraser River, consisted of 81 persons, 66 horses, and 79 mules. General Sherman's mess consisted, as before, of himself, Justice Gray, Colonel Dodge, and myself. General Miles had with him Surgeon Moore, Lieutenant Mallery (his aid), and Mr. Saurin; Major Jackson, commanding the escort, had Lieutenants Rowell, Backus, Abercrombie, and Goethals. Backus was in charge of the pack train, and Goethals was the engineer officer and general guide; he, having been over the country before, had prepared a most accurate map and description of the route. We were provided with tents, the poles of which had been cut and so jointed as to be

readily carried on mules. The little personal baggage we had was prepared so as to be readily carried in the same way. Good strong horses had been selected for our riding purposes.

August 8.—In the early morning we took an Indian trail leading up Kettle River, passing through heavy forest, over some rough spurs of hills, and across sandy, low ground; here and there were Indian cabins and small fields of cultivated land. In our march the General led off, except occasionally, when some one would go ahead as guide; then followed the rest of us in Indian file; after which came our cavalry escort, and finally our pack train; the latter under charge of skillful packers mounted on mules. This country is infested with a small fly or gnat which is a torment to both man and brute. There is no escape from its pertinacity except by the most industrious application of a leafy bush, and as our party wound along, each one with a bush in hand, we resembled a church procession on Palm Sunday.

Following up Kettle River for about 7 miles we crossed over to the right bank, and leaving it, took a northwest direction over the rugged spur of a mountain to Deadman's Creek, which we followed up a mile or so and made camp on the best ground we could find in the mountain gorge through which the creek flows. Kettle River here makes a great bend, sweeping around across the national boundary line. A trail follows around this bend, but as it crosses the river many times, is not passable except at low stages of water, when the river is fordable; otherwise it is said to be a reasonably good trail, and was formerly considerably used by Hudson's Bay Company people. The trail we were following cuts across the bend 30 miles, and is known as Little Mountain trail. Considerably south of this is another trail, known as the Old Hudson's Bay Company trail. All of these trails have been but little used of late years, and have become greatly obstructed with fallen timber. A couple of companies of infantry from Cœur d'Alène had been out since about the middle of June re-opening the southernmost of them, but as this was not the one over which General Sherman wished to travel they were changed over to the Little Mountain trail, but owing to want of time or energy on the part of the commanding officer they had done but little towards improving it. In consequence of this Lieutenant Abercrombie, with a detachment of Jackson's cavalry, had been dispatched ahead of us to do what he could to open the route. He however could do little more than keep ahead of us. Caches of oats had been made along the trail at proper distances for camps; one of these was at the point on Deadman's Creek where we now encamped.

In starting out this morning one of the pack mules, after being packed, instigated by the spirit so fittingly expressed by the term pure cussedness, hid himself in the bushes, and was found only after troublesome search. It had somehow managed to free itself from its pack, which could nowhere be found, and, as ill luck would have it, contained the entire supply of horseshoes for the whole command. This was a loss of no small moment, seeing that our animals had before them a journey of over 200 miles through a country known to be of the roughest possible kind. Nothing, however, could be done to repair the loss, but right sorely did some of the animals suffer for want of reshoeing before they reached the end of the trip. Aside from this all our packs came into camp in good condition.

Prior to reaching Colville we had been joined by Mr. Willis, a young gentleman, son of the late N. P. Willis, who as geologist in the interest of the Northern Pacific Railroad was exploring these regions for coal and other minerals. He had an outfit of two or three persons and sev-

eral pack mules. He traveled in company with us to Osoyoos Lake, from whence, striking southward, he intended to explore the country in the direction of Lake Chelan. He evidently possesses rare attainments as a practical geologist, and in his observations upon the country over which we were traveling imparted to us much interesting knowledge.

Upon leaving camp this morning, Dodge, Rowell, Saurin, and Willis, lured by the marvelous stories they had heard of the abundance of game in the country west of the Columbia, started in advance, for the purpose of hunting. In the eagerness of pursuit they had passed beyond the place for encamping, and, dreading to return to us over the trail which they found to be, as they expressed it, "most damnable," they encamped *al fresco*, and having secured during the day a couple of wood grouse managed to cook them for a frugal supper. Their absence from our camp gave us no concern, for we knew that such veteran woodsmen were not to be lost.

Our trail to-day, after crossing Kettle River, was decidedly rough; we had commenced to ascend the mountain, which was steep, and the trail around its sides so very sidling as to afford in many places only precarious footing for our animals. A cavalryman and his horse did indeed go over, and, sliding into the ravine many feet below, was extricated with difficulty. For some distance the mountain here, formed of dusty sand interspersed with gravel and boulders, seemed as though upon the point of sliding either from above upon us, or from under us to the abyss below. Owing to the dryness of the season the trail soon ground to dust which rose around the animals in such dense clouds as to prevent them seeing the trail. Rocks, trees, and underbrush obstructed it. The day was hot and insects bad. We made 17 miles.

August 9.—We continued on up the gulch of Deadman's Creek for several miles, and then leaving it climbed the mountain without passing any other streams. Our march of yesterday was hard, but that of to-day much more so. To what we had yesterday was added, for to-day, entanglements of fallen timber through which the animals had to scramble. Overhead were trunks of trees, limbs, and brush to knock and tear us. The rocky trail was full of the nests of yellow jackets, and these spiteful insects, arising in swarms stung our animals to frenzy; as perversity would have it these nests were mostly in places such that we could not avoid them by going around. The gnats were also tormenting, and many were the swollen ears and bunged-up eyes brought into camp this evening. It was pitiable to see our animals clambering among rocks and falling timber, scratched and prodded by projecting points, and stung to madness by insects. The sharp point of a limb striking the horse of the General made an ugly gash in his belly, caus- him to pitch and rear in such manner as to throw the General, but fortunately upon some bushes, breaking the fall and not hurting him seriously.

The intricacies of the trail were such as to keep each individual on the alert for his own personal safety, and it was in silence that we scrambled on our way. The descent for about 2,000 feet was even worse than the ascent, but after that the trail grew better; there was less of fallen timber, underbrush and rocks, and fewer steep places. A thick growth of grass began to appear in the open pine forest, and a few miles farther on brought us to our camping-place, already occupied by the trail-cutting party, of Lieutenant Abercrombie. Here also we found the missing huntsmen, who in the early morning feeling, the demands of appetite, had pushed on to breakfast with the lieutenant. Our camp was a good one, and after the fatigues of the day greatly enjoyed by us all.

August 10.—This morning we continuedon down the mountain over a comparatively good trail. Near the foot of the monntain we again came to Kettie River, which we crossed at a good ford, and, continuing up its valley for about 10 miles, crossed and recrossed it several times; the last crossiag was near the mouth of Tenasket Creek. Along this part of the river the trail occasionally passes over sharp points of hills overlooking the stream, but generally the land is level and rolling. The river is lined with large cottonwood trees, rather a rare sight of late. The country is well covered with grass, and the scenery is fine. Near the mouth of the Tenasket are a couple of houses built by a white man known as Buckskin John, but now owned by Chief Tenasket, who lives at Osoyoos Lake, but uses these ranches for his cattle herds. There are also here several fields inclosed with good worm fences.

August 11.—As the trail to-day leads through a bad strip of fallen timber, we did not leave camp until 8 o'clock in the morning, thus giving time to Lieutenant Goethals with a pioneer party to cut it out. The trail leads up the narrow valley of the Tenasket for 3 or 4 miles, passing through the before-mentioned strip of obstructed road; it then leads over the divide to Myer's Creek, another tributary of Kettle River. This divide is a mountain about 1,500 feet above the creek. The side upon which we ascended was very steep and in one long stretch. The descent was long and sloping, and covered with a fine forest of pines. Soon after reaching the foot of the mountain we came to Myer's Creek, a good-sized mill stream, edged with willows, cottonwood, and a great variety of berry-bearing bushes. Here we found a couple of ambulances and wagons which had been sent from Lake Osoyoos to meet us. From Osoyoos here there is an old road or trail formerly used for reaching gold mines about 20 miles north of here on Kettle River. During this day we made 16 miles. The scenery was fine, but much obscured by smoke.

August 12.—The trail does not follow Myers' Creek, but, after crossing, it passes directly over the divide to the watershed of the Okinakane. This divide, although containing many short steep pinches, is not difficult nor high. To Osoyoos Lake is 18 miles, most of the way without timber. The country is rolling and mostly covered with grass, large areas of which had been recently burnt. There was no water the entire distance except in two pools, one of which was too alkaline for use and the other somewhat difficult to reach by reason of swampy margin. In approaching the Okinakane we passed some Indian ranches with small fields about them. Soon after mid-day we reached Osoyoos Lake, where is located a United States custom-house, the principal business of which is to collect $1 per head on cattle imported across the boundary from British Columbia. The custom-house is a log-cabin shanty with dirt roof, and a small and similar attachment serving the purpose of kitchen. This squalid establishment stands uninclosed by fence in the midst of sand and dirt, on the edge of a ravine containing a fine spring of cool water, the only redeeming feature about the place. In front of the house, upon a crooked stick, waved the stars and stripes, below which emblem of sovereignty was the revenue flag. The collector, Mr. C. B. Bash, living here alone, was very courteous to us. The day was exceedingly hot and oppressive, and although so unattractive, his house furnished us cool shelter from the scorching sun. On the low ground next the lake is the ranch of Mr. Smith, surrounded with patches of cultivation and fruit trees. From him we obtained melons and apples, the latter of a most excellent flavor. Smith keeps a sort of store, trading principally with Indians.

Osoyoos Lake is a strip of water resembling a good sized river; it is in fact only the widening out of the Okinakane, which leaving the lake at its southern extremity, flows sluggishly to find its way to the Columbia. The lake is surrounded at the distance of 2 or 3 miles by mountains and hills. The intervening space is a sloping plain of sand and sage-brush. Around the edges of the lake are tule marshes. The water is clear and shores sandy. The region round about is quite destitute of timber and the whole aspect is one of barrenness. In 1860 or 1861 the hull of a steamboat was built on this lake and floated down the Okinakane to ply upon the Columbia above The Dalles. About the same time Mr. Gray and other Oregon pioneers, with the restlessness characteristic of that class, leaving the smiling lands of Oregon, penetrated with their families to this inhospitable region. After a short sojourn they returned wiser if not better people.

We pitched our camp on a high bluff overlooking the custom-house or shanty and close by the camp of a company of the Twenty-first Infantry here on temporary duty from Vancouver Barracks, taking care of a quantity of forage sent here for our use. During the afternoon the General was called upon by Tenasket and a large following of his people. He is a respectable looking oldish man, resembling in appearance a Louisiana Creole planter. He is said to be quite wealthy in cattle and farms. In the night a strong wind sprang up covering everything with dirt, sand, and disgust.

August 13.—We were glad to leave this disagreeable place, and so, too, evidently were the infantry soldiers who were early in the morning breaking camp preparatory to their leaving for Vancouver. The company propose to float down the Okinakane on rafts in preference to a hard march overland.

The pink-eye had made its appearance among the cavalry horses, and such of them as were affected were left behind with some men under Lieutenant Abercrombie to await the return of the troop after having made the trip to Fraser River.

We took the road leading up the lake through deep sand, sage-brush, and grease-weed. About 2 miles from the custom-house we crossed the northern boundary line of the United States and entered upon British territory. The boundary line is marked near the lake by a pyramid of stones.

Crossing this line recalls the controversy some forty years since had over the Oregon question, which controversy came nigh involving two great nations in war. At that time the entire country from the northern boundary of California to the Russian possessions was called Oregon. The United States became owners of it in 1804 by purchase from the French Government. The latter had acquired it by treaty from Spain, which Government had established her claim to it by discovery and occupation. The British claimed it from Spain in satisfaction for certain damages alleged to have been sustained by one Mears, a half-pay lieutenant of the British navy, who, in 1790, to evade certain maritime regulations of his own country, and also of Spain, sailed with fraudulent papers from a Portuguese port in the East Indies, bound on a trading expedition to Nootka Sound, an insignificant bay on the west coast of Vancouver's Island. He was expelled from there by the Spanish authorities, and then laid before his own Government a bill for damages. The British Government, seeing in them an opportunity for seizing on a country, backed up his pretensions with gigantic preparations for war against Spain. The latter nation being entangled with complications growing out of Napoleon's schemes, was in no condition to resist, and

granted to Great Britain certain trading privileges upon the northwest coast of America. This was the celebrated Nootka convention. These privileges were carefully nursed, and in time grew into the color of ownership to the whole country down to and including the Columbia River.

In 1843 people from the United States began to settle in Oregon, and the great fertility of the country and salubrity of the climate becoming known attracted in a few years a large population. The Hudson Bay Company held sway over the country under British grants, and conflicting interests soon made it necessary to settle the question of jurisdiction. The controversy between the British Government and that of the United States was long and spirited. The British threatened to maintain their claims by resort to war. During the political campaign which resulted in the election of Mr. Polk to the Presidency the question of resistance to British assumptions entered largely into the spirit of the election contest, and "Fifty-four Forty, or Fight," coupled with "Texas regardless of consequences," became the political slogan. The result was the annexation of Texas, but the fear of the then ruling portion of the United States that by extending northward too many non-slaveholding States might spring up caused the claim to the parallel of 54° 40′ to be abandoned. One of the first acts of the new President was to propose to the British Government to compromise on the 49th parallel. This the British Government at first indignantly declined, but at length an agreement was effected, accepting the forty-ninth parallel as the dividing boundary, but giving to Great Britain the whole of the island of Vanuver.

About 2 miles beyond this noted line we came to the residence of Judge J. C. Hayne, the British collector of customs. Unlike the custom-house on the other side of the line, this is a neat, comfortable frame building, with brick chimneys and broad piazzas. It occupies a beautiful site on the shore of the lake, which is here a clean sandy beach. Judge Hayne received us most hospitably; his wife and family were absent at Westminster. At this point is a narrow place in the lake, making, in fact, two lakes. Over this neck is a rude bridge built and kept by Mr. Kreuger, a German, living on the opposite side. Just before reaching the British custom-house we met a half dozen of Chinamen who being about to enter the territory of the United States contrary to the law excluding Chinese, were turned back by the United States collector to retrace the dreary road to the Fraser River.

Crossing the bridge just mentioned we continued up the shore of the lake for about 4 miles, and turning to the left, ascended the divide between the lake and the Similkemeen River. This divide is not very high, but it is very steep and rough; the descent is gradual, following down a narrow valley or cañon for several miles. On either hand are high mountains and several small lakes are passed on the way. These contain putrid water, smelling badly. After the descent we came abruptly upon the Similkemeen, a stream in size between a creek and river. We traveled up it for 7 or 8 miles and then went into camp on its steep and high bank. Just before reaching this point the river washes close under the point of a mountain; around this point the trail has been cut from the solid rock and is supported by a substantial wall. This was the work of British troops engaged on the boundary survey. Although the sun was hot we had a good breeze and did not suffer; nor were we tormented by gnats or mosquitoes. The place where we encamped was a smooth plain, gently sloping from the foot of a bare mountain. This

plain had no grass, but plenty of cactus in bunches. The atmosphere continues smoky, obscuring much fine scenery.

August 14.—Within about 2 miles after resuming our trail this morning we came to an extensive scope of meadow land, causing us to regret that we had not continued on and encamped at this place. A few miles further brought us to ranches with large fields of oats, wheat, and grass, with gardens of corn, potatoes, and other vegetables. The chief of these places was that of Mr. Richter, who was at this time putting up large ricks of hay; he had large quantities of it still on hand from last year.

The people who cultivate these farms appear to know but little of modern improvements in way of farming implements. Their wagons are rough affairs with solid wooden wheels like Mexican carretas. Passing through this cultivated belt we came to Price's mill, the site of an old Hudson Bay trading post. The valley is inclosed by high mountains, which, above the mill, gradually close together, often making narrow places between the mountains and river, which are exceedingly rough by reason of the rocks and stones which have fallen from the mountain. The mountains are exceedingly precipitous, in fact, in places quite perpendicular. In many places occur stone slides which are very curious; they look as though rocks had been poured out from above, and, like sand, had assumed a natural slope; the rocks are of every dimension from a paving-stone up to a good sized building block; the larger ones, sometimes the size of a street-car, falling with greater power roll to a greater distance from the foot of the mountain. The formation is conglomerate and trap, alternating every now and then with granite. Clinging to the sides of the mountains is a sparse growth of pines, and along the river a thicket of cottonwood and willows.

August 15.—Our trail upon starting led close under the foot of the mountain, which, rising high above us to the east, kept the sun from us until late in the morning. The valley gradually narrows until it becomes little more than a cañon. About 5 miles after starting we came to some Indian ranches with large, well-cultivated fields of wheat and oats. Occasionally we crossed a sparkling stream flowing down from the mountain; if utilized these streams would irrigate a large part of the slope lying between the talus of the mountain and the river. At the Indian ranches just mentioned a courier, in great haste, overtook us, seeking for medical assistance for a miner, who the day before had been seriously injured by a blast. The distance was some 30 miles back, and too great to send assistance, but Dr. Moore explained to the messenger the course of treatment to pursue with the wounded man. Most of the trail to-day was exceedingly rough, leading over great piles of rocks that had slid and rolled down from the mountains. At one place the trail had been washed away by a recent cloud burst, and we had to get around the break by going up over an exceedingly rough side of the mountain.

We encamped on the bank of the river a few hundred yards below the mouth of Graveyard Creek. The river is full of trout and white fish, great numbers of which were caught by the fishermen of our party. A short distance from our encampment was another party, consisting of an English gentleman, his wife, and two or three children. They had a comfortable outfit of pack-animals, and were on their way from Hope to the Okinakane. The Okinakane country has great reputation with the people of British Columbia for its productiveness and the salubrity of its climate; great indeed should be these advantages to counterbalance the difficulties to be overcome in reaching that remote region, and stout of heart must be the woman, who with her children

undertakes the journey. Children are carried over these rough trails on horses or mules, held on by an Indian riding the same animal. There was little or no grass at our camp of this evening.

August 16.—During the night we had a slight thunder shower, the first rain we have had since leaving the park. We are glad to have it, hoping that it will clear the atmosphere of smoke, and give us a better opportunity of seeing the splendid scenery through which we are traveling. The morning opened clear, but as we were mounting to start it commenced again to shower, and kept it up for an hour. Soon after crossing Graveyard Creek the trail took the side of the mountain and was exceedingly rough, crooked, and sidling. Graveyard Creek is so named from a small Indian burial-place near its mouth. The graveyard is inclosed with a paling fence, and ornamented with rude carvings. About 6 miles from this creek we came to Allison's ranch. This place was formerly known as Princeton, the name of gold mines in the vicinity. These mines are no longer worked, but the remains of old ditches are still to be seen winding around the hills through the forest. Allison's place consists of a comfortable log dwelling, and a few outbuildings. In one of the latter is kept a small store, or what might flatteringly be called a store; who the customers are is difficult to tell. Allison himself was absent, being at Victoria, but his courteous wife received us with hospitality. She is a rosy-cheeked English woman, apparently about twenty-five, but is old enough to boast of ten children, healthy, handsome urchins, another instance, as before remarked, that the more distant and difficult of access the place, the more prolific are the human inhabitants. She informed us that she had been residing here fifteen years. She appeared cheerful, happy, and contented, in her isolated home. Allison's business here is cattle raising, and although there is no grass, nor signs of grass anywhere about his ranch, it is said there is good grazing in the foot-hills not far off. The cattle are driven to the valley of the Okinakane for wintering; there hay is put up for that purpose. The distance to the Okinakane is about 50 miles. The cattle finally find their way across the boundary into Washington Territory at the Osoyoos custom-house, and from thence eastward to a market. They start as yearlings, and come out full-grown beeves. Allison's ranch is about a mile below the junction of the West and South Forks of the Similkemeen.

Crossing the West Fork at a ford very rough with bowlders, we soon commenced to ascend to a rolling table-land covered with heavy timber and well clothed with grass—pine and bunch grass mixed. The ascent to this plateau was over a difficult trail, as was likewise the descent. On the way we passed first Five, and then Nine-mile Creeks; the distances being taken from Allison's; after leaving the plateau the trail was very much broken by small tributaries of the Whipsaw Creek. This latter creek follows in this part of its course a deep cañon, along the ragged edge of which the trail winds far above the dashing stream. In many places the trail had been cut around rocky points, in passing which we looked down into a frightful abyss. The trail along here is a public highway kept up, if kept up it can be called, by the Dominion Government. Some of the streams in deep ravines have been bridged; but the bridges are rickety, corduroy affairs fearful to cross. In various ways this part of the trail is diversified with badness. At several places along here are large corrals for securing at night cattle driven through here. The country is so broken, if they once got astray they could never be recovered. After following up a creek (for which we could discover no name) for a few miles we made camp at a place supposed to be called

Old Powder Camp. There was little or no grass for our animals. Dense woods with a great deal of fallen timber all around.

August 17.—We continued up the creek near which we had encamped, gradually ascending Hope Mountain; the trail up this mountain is quite good, in fact almost a wagon road. As we ascend, the character of the timber changes; the red pine ceases and the slender black pine, interspersed with a good deal of Norway spruce, takes its place. A great deal of the mountain had a few years before been burnt over, and great masses of fallen timber covered the earth. The summit of the mountain at the pass has an altitude of 5,720 feet, and is quite bare of trees. On top is rolling plateau for a mile or so, covered with grass, green and fresh. Patches of snow are lying around here and there, and looking in every direction, are seen mountains well covered with it. The atmosphere was quite free from smoke and the views were simply magnificent. To our left were the gloomy gulches of the headwaters of the Skagit River. The wind was blowing fresh and the air was so chilly and cold as to make us glad to commence the descent and get to the shelter of timber. The descent, however, proved very steep and rugged. The regular trail had been obstructed by a land slide and we were now following one but little used and difficult to follow. About 7 miles from the summit, when about half way down the mountain, we made camp in the best place we could find among the fallen timber. There was plenty of wood but no grass. The sky became overcast towards evening and there were occasional flakes of snow.

Towards dusk one of the packers brought into camp the carcass of a deer which he had killed. This was the first we had seen in all our journey; we passed through regions abounding, no doubt, in large game, but saw none. Experts explained that it was because it had all taken refuge from gnats and flies on the tops of mountains. In the Big-hole Valley we had seen a dozen or so of antelope, but nowhere did we see buffalo, elk, or bear.

August 18.—During the night snow fell to the depth of three inches, and was still snowing when we started in the morning. The trail for the first 6 or 7 miles was through a dense forest of Norway spruce, over ground much of which was boggy other parts were unspeakably rough from rocks, logs, roots, and broken corduroy. The snow caused the animals to ball badly, slip and stumble. The most veteran of our trail travelers emphatically pronounced it the worst traveling they had ever encountered. The snow clinging to the branches of the trees came down in masses upon us, adding greatly to our discomfort. About 6 miles from our camp we came to the head of the Skeist River Cañon, which is about 18 miles long. The descent during this distance is about 2,000 feet, and the trail throughout is excessively rocky and rough. The mountains on each side of the cañon are high and precipitous. All along are evidences of the terrible work of avalanches and torrents. The snow of some of these avalanches, mingled with rocks and trees, was still unmelted. In some cases the *débris* of the avalanches filled the entire bed of the cañon and was difficult to cross. About 8 miles down the cañon we came to the remains of a wagon road, now used only as a trail leading to Hope. This road had been constructed by Royal Engineer troops, and was remarkably well built. Its object was to open up for settlement some valleys lying among the mountains to our left, but the enterprise proved a failure. The bridges had rotted down and torrents had washed the road away in places for long distances. A good part of the road, however, still remained intact, and afforded us an excellent trail. As we approached a lower level, the

Norway spruce and black pine gave way to immense cedars, and the Oregon pine, so famous for its size and beauty. Sixteen miles from Hope the cañon widens out a little, allowing space for several thousand acres of low marshy land, interspersed with ponds, the remains of ancient beaver dams. These ponds are the source of the Skeist, a tributary of the Skagit. On a hill overlooking the ponds is a small dilapidated shanty, which has the sounding title of the Lake House; this is 15 miles from Hope? Here we encamped for the night, and our animals found scanty grazing in the marshes of the old beaver dams. Taken all in all, this was the most disagreeable day's march that we had encountered in our entire route.

August 19.—The first two miles of our trail this morning led us over a low divide to a small lake, the source of Lake River, which empties into the Fraser at Hope. After passing this lake the mountains again close in, forming a cañon which continues on down to within two or 3 miles of Hope. The cañon of yesterday and this one are, together, about 30 miles long, and cleave the heart of the Cascade Range of mountains. Our trail to-day following the old road was excellent, and at one o'clock we rode into the village of Fort Hope, and pitched our camp on the banks of the Fraser. The Fraser is a mighty river, resembling in size and appearance the Missouri. It has a strong, swift current, and the water has a grayish-brown color, caused by mining, and the washing of clayey bluffs along its course.

Fort Hope is an old Hudson's Bay trading post; about it is some level land surrounded on all sides by high mountains. Lieutenant Mallory had been dispatched ahead of us the day before, and had, awaiting our arrival at the steamboat landing, bales of hay and sacks of oats—a grateful sight to our hungry animals, who had been on short allowance of forage for several days. Our animals, with the exception of being leg weary, were in excellent condition. They had carried us so faithfully that we parted with them with almost the affection of Sancho Panza for his dapple.

Aside from the marvelous endurance of the horse that carried Justice Gray, the most remarkable animal of the herd was a colt, the offspring of the bell mare. This colt was only about four months old, and from the first week of its existence had been constantly on the trail, and went through our rough journey the admiration of every beholder. Soon after it was foaled the mules, in showing their affection for it, were near trampling it to death; a muleteer going to its rescue was turned upon by the mules, and in the struggle one of them bit the man's ear off clear and clean.

Soon after our arrival, a deputation from Yale waited upon the General inviting him to visit that place. As soon as we could remove the dust of travel, the General, Justice Gray, General Miles, and myself, crossing the river in canoes, took a construction car for Yale, distant, up the river, some 15 miles. This road is the Canadian Pacific; along here it follows the right bank of the Fraser, and most of the way the track is cut from the side of the mountain.

Yale, like Hope, was an old Hudson's Bay trading post, some of the buildings of which are still standing, and in bold contrast with their new surroundings. The town has an estimated population of 2,000 inhabitants, a mixture of all races and nationalities. It is at the head of navigation for the Lower Fraser. Immediately above the town are rapids, but beyond these are stretches of the river that are navigable. The railroad passes through the town and disappears a short distance above in the deep gorge of the mountains from which the river emerges.

The road is to follow up the Fraser to Thompson's River, up the latter, crossing over to the branches of the Columbia, thence across to the Saskatchawan, thence over to Winnipeg, on the Red River of the North, and thence eastward to Thunder Bay or some other point on the great lakes. In its course it is to cleave the heart of the terrible Cascade Range, a stupendous undertaking. According to the estimates of those having the work in charge, the cost of this cutting, for grading alone, will average $80,000 per mile, and there are many miles of it. The portion now under construction in British Columbia is the link connecting the western end of Kamloops Lake with Port Moody, the Pacific terminus on the Gulf of Georgia, a distance of 212 miles. The contract for this link is held by A. Onderdonk and associates, who are pushing the great undertaking to completion with vigor and energy. Mr. Onderdonk is from New York. His entire corps of assistants are from the States, and this alone gives assurance that the work will be done, however difficult it may prove to be. Mr. Onderdonk was himself absent, but we were handsomely entertained by his accomplished wife. In the evening we went aboard of the Western Slope, one of the steamers running to Victoria, and spent the remainder of the night.

August 20.—The steamer started at daylight, and about 8 o'clock was at Hope, where we took in our baggage, and bidding good-bye to Major Jackson and his officers, proceeded on our way. Jackson is to return over the rugged way we had come to his post at Cœur d'Alène. The steamer took aboard, at Hope. 90 head of beef cattle, for the Victoria market. These came from Nicola Valley and had preceded us on our trail for the last 60 miles. They came from bunch-grass grazing and were sleek and fat.

The mouth of the Fraser is a great delta of alluvial soil, rich, and to a great extent, an open meadow. It is subject to overflow, but is easily reclaimed by slight ditching and diking. Some of it has been so reclaimed, forming excellent farms, producing fine crops of wheat, barley, oats, and hay. Along this part of the river are numerous salmon canneries, some of which are very extensive. The salmon are taken by Indians with gill-nets; Chinamen do the labor of canning.

August 21.—At 1 a. m. the boat reached her wharf at Victoria, and we were met by a large number of citizens, with a band of music, eager to do honor to the General. We took quarters at the Driard House. At an early hour in the morning the General was called upon by Mr. Allen Francis, the United States consul at this place. Soon afterwards the General, Justice Gray, General Milles, and the consul called upon the governor, Hon. C. F. Cornwall, and returning to the hotel were called upon by Admiral Lyons, commanding the English North Pacific squadron, and by several other gentlemen of note. Early in the afternoon our party, accompanied by the consul, went aboard of the revenue cutter Walcott, and steamed around to Esquimalt Harbor for the purpose of paying our respects to Admiral Lyons. Going aboard of his flagship, the Swift-sure, we were received most cordially by the admiral and his officers. The Swift-sure is a powerful iron vessel of 5,000 tons burden. Near by were anchored the Sappho, Mutine, and Heroine. Upon leaving the flagship the General received a salute.

The cutter Wolcott had been placed at the disposal of the General to transport us to New Tacona on Puget Sound, and at 4 p. m. sailed, reaching Port Townsend at 9. Here we were met by the collector of this district, Mr. Bash, brother of the collector at Osoyoos. One brother let us out of the United States and the other passed us back again. Consul Francis had laid before the Dominion officials the au-

thority which the General had obtained from the British Government, through the State Department, for crossing over the boundary with United States troops.

August 22.—Early in the morning the Wolcott steamed around to Port Townsend, distant only a few miles, but difficult to find on account of the smoky condition of the atmosphere. This smokiness prevented us from seeing the beauties of Puget Sound.

After a hasty inspection of the post, garrisoned by two companies of the Twenty-first Infantry, under Lieutenant-Colonel Chambers, we continued on to Seattle, where the General was received at the wharf by a crush of citizens assembled to receive him. From Seattle we proceeded to New Tacona, and next morning took the cars for Kalama, and then a steamer up the Columbia to Vancouver, where the General was received with all the honors of war. We remained at Vancouver until the afternoon of the 25th, when we went over to Portland, where the General was enthusiastically received and escorted to the pavilion, where a vast crowd paid their respects to him.

Late in the evening of the following day we took passage aboard the steamer Oregon for San Francisco, where, after a delightful passage, we arrived on the morning of the 30th.

We remained at San Francisco until September 8, during which interval the General inspected all the posts in the harbor, and we enjoyed ourselves receiving the hospitalities of friends and visiting places of interest. On the morning of September 8, we again started on our journey. Crossing over to Oakland, we took a special car on the Central Pacific, and passing by Los Angeles, arrived at San Gabriel at about the same hour of the following morning. There we took carriage and were driven through vineyards and orange groves 5 miles to Sierra Madra Villa, a small hotel, on a sloping bench, close up against the precipitous walls of San Bernardino Mountain. This place is elevated some 500 feet above the valley of the San Gabriel, which stretches out below some 20 miles to the Pacific. In clear weather Santa Catalina and other islands can be seen breaking the horizon to the westward. Over this entire region nature smiling has bestowed her richest gifts—a tropical climate, tempered by ocean breezes, to perennial spring, and a soil securing the broadest and highest agricultural and horticultural possibilities. As far as the eye can see, the plain below us is a vast field of vineyards and orange groves, interspersed with lemons, pomegranates, limes, and other trees of semi-tropical growth. The fertile soil of this region is quickened into life by streams flowing from the water-bearing strata of the Bernardino Range. Every drop of this water is utilized for irrigating purposes, and tunnels have been driven into the mountain to tap a deeper supply. American enterprise has struck the rock, and copious fountains flow to invigorate the fruitful vine.

In the morning of the day after our arrival at Sierra Madra Villa we took a carriage and spent the day in driving among these fruit plantations. First we drove through the long avenues of the orange groves of Mr. Baldwin, and then to the winery of Mr. Rose, where we saw the process of making wine from the time the grapes, in wagon-loads, are delivered at the hopper of the grinding machine, until the juice is stored away in casks. From Rose's we drove past miles of vineyards and orange groves to Mr. Shorb's, who, besides a splendid plantation, has a most delightful location for his residence, overlooking as it does from a terrace a waving sea of vines. Then through shady avenues of eucalyptus we drove to Wilson's, the pioneer grape producer of this

region, and from there to Governor Stoneman's, and then back through Pasadena to our hotel. Pasadena is an incorporated colony of settlers, united for mutual help and security in matters of water privileges. This colony feature enables small proprietors, of a class that could not otherwise get foothold in the country for want of means, to obtain homes, and by their own labor support themselves and families, and await patiently the slow growth of moderate fortunes. Each of these small homesteads had its vines and oranges, and the neat dwellings were shaded by the graceful pepper tree. Side by side with the orange and lemon grow apples, pears, peaches, and other fruits known to temperate zones. The country is one mass of fruit, affording an inexhaustible supply for less favored regions.

On the morning of September 11 we again took possession of our car, which had awaited us on a side track at San Gabriel, and hitching on to a passing train, were soon at Los Angeles. Here we were met at the depot by General Bonton and others, who, taking us in carriages, showed us the beauties of the place. The old Mexican town remains intact in its squalor, surrounded by a new, neat, and thrifty city of 20,000 inhabitants. At dinner, at the Pico House, we partook of a watermelon weighing 104 pounds, a sample of the productiveness of the country.

At 10 o'clock at night we reached Mojave station, the junction at which the thirty-fifth parallel road starts eastward. This station is in the midst of the Mojave sand desert, which is an extension to the north of the great Colorado desert. Here our car was dropped, the regular train going on to San Francisco, and we remained in this lonely place until morning, awaiting the departure of the train for the Needles on the Colorado River. Although it was bright moonlight we could see nothing in the sandy waste around us but the ghostly yucca, standing wierd, fantastic, and uncanny. An unwritten tradition locates this as the place where the evil spirits of the mountains uniting with the witches of the desert produced by hellish engenderment the Digger Indians of the Sierra Nevadas. The wind blew a gale and sifted our car full of sand.

On the following morning we started for the Needles, the entire distance to which, 240 miles, is desert, with only here and there along the road a human habitation; those belonging to the railroad are neat and comfortable, the rest are mere shanties. Two or three mines with steamworks attached were passed on the way. About half-way is a sluggish stream which soon loses itself in an alkaline sink. This sink in dry weather (as at this time) is a bare, dry plain covered with alkali efflorescence. From this on the road follows dry washes to the Colorado. These washes are peculiar to countries like Arizona and New Mexico. They are sandy beds of streams, generally dry, from a few feet to several miles in width. They are smooth and have a uniform descent of about 200 feet to the mile. As this descent is greater than the usual maximum grade of a broad-gauge railroad, the track in following them winds around in the most curious manner. We arrived at the Needles at about 4 p. m., and were taken charge of by Mr. Williams, general passenger agent for the Atlantic and Pacific road, which from here extends to Albuquerque. After transferring to a special car of this road, we crossed the Colorado on a bridge of piles and followed down the valley of the river for 12 or 15 miles, and then leaving the valley proceeded up the Sacramento Wash. The valley of the Colorado is here some 10 miles wide. Near the river it is covered with a growth of cottonwood, mesquite, and other bushes. The river is a swift, muddy stream, some 200 yards wide. In this part of the valley reside the

Mojave Indians, who, in a rude way, cultivate patches of the land. The men of this tribe are remarkable for their handsome forms. We saw quite a number of them lounging around the station. They were the same looking people that I had seen when here thirty years ago, except that now they dress in a calico shirt, their only garment, and at that time they did not. This valley is remarkable for its heat and dust, and we found it so. Owing to some antagonism between the Central and the Atlantic and Pacific Railroads, uniting at this point, there is no connection of trains. The former runs passenger cars only thrice a week; the latter have not yet put on any regular trains.

The Needles are a group of sharp-pointed mountains of red volcanic rock, through which the river breaks its way. They were named Needles by Lieutenant (afterwards General) Whipple, then, in 1854, exploring the line of the thirty-fifth parallel, for a route of which this railroad is the realization.

Night came on while we were yet following up the Sacramento wash. Next morning found us on the plateau of the San Francisco Range of mountains. During the night we had passed the Pecacho Range. The San Francisco plateau has an average elevation of 7,000 feet. The mountains rise above this about 3,000 feet. Arizona Divide, the highest point passed by the railroad, has an elevation of 7,350 feet. The San Francisco Range includes, besides the mountain of the same name, Mount Humphreys, Mount Kendrick, Mount Sitgreaves, and Bill Williams Mountain, the latter named after a celebrated trapper, who, some forty years ago, penetrated these regions. His name was also given to a fork or tributary of the Colorado entering the latter some distance below the Needles.

The San Francisco plateau is diversified by numerous rounded volcanic hills and beautiful glade-like valleys all clothed with the nutritious gramma-grass. Many of these valleys are occupied by settlers, who have made a fair start in way of opening up farms. Excellent pine timber abounds everywhere, and several large saw-mills have been established, and are turning out large quantities of lumber. This finds ready market at Albuquerque and other places in the valley of the Rio Grande. We met here Mr. Thomas, agent of the railroad building from El Paso to the City of Mexico. He is inspecting ties, great quantities of which are furnished by these mills.

Soon after commencing the descent from the plateau the railroad crosses the wonderful Cañon Diablo, a crooked and winding rent in the midst of a broad, smooth plain. It has a depth of 210 feet and an average width of about the same. It has irregular sides of solid rocks, many of which about the bridge are ornamented with patent-medicine and other like signs painted in letters so conspicuous that even the Navajoes cannot fail to comprehend the virtues of the articles advertised. This suggests that perhaps many of the Indian inscriptions that so bother ethnologists are nothing but trade signs recommending superior tomahawks, arrow-heads, and other fabrics of Indian manufacture. The road crosses the cañon upon an iron bridge which, when viewed from below, presents a very ethereal appearance. A few miles further on brought us into the valley of the Colorado Chiquito at the crossing of which we met General Stanley on his way to view the Grand Cañon of the Colorado.

This railroad, passing within 30 miles of this stupendous wonder, has brought it within the range of those seeking the picturesque and grand. The road follows up the valley of the Colorado Chiquito, crosses the Lithodendron Creek, so named on account of the forests of petri-

factions in its valley, and then continues up the dry bed of the Puerco to Wingate. At this station we were met by General Bradley, colonel of the Thirteenth Infantry, and taken to his post, Fort Wingate, distant 3 miles. Here we remained until the following morning. The General inspected the post, which is garrisoned by five companies of the Thirteenth Infantry and two troops of the Fourth Cavalry, all comfortably quartered in adobe buildings. The clay from which these adobes are made gives the buildings a grayish-blue tinge, very neat and pleasing to the eye. The post is supplied with water from the celebrated Ojo del Oso or Bear Spring.

In the valley of the Puerco the Navajo Indians have considerable land under cultivation in corn. We also saw many of their herds of horses and flocks of sheep and goats.

The next morning, September 14, we resumed our car and proceeded on our way. In a little while we passed again the Continental Divide, a gradual slope scarcely perceptible, and struck the waters of the San José, a tributary of the Rio Grande. The San Mateo Mountain, an extinct volcano, loomed up to the northwest, and soon we came to the Lava Beds, remarkable for their length, breadth, and depth, and the curious manner in which the lava is twisted and heaved into billows. After passing the Lava Beds we passed straggling houses and fields of Pueblo Indians, and soon after came to the pueblo of Laguna, where the train made a short halt, giving us time to go around that curious place. It is evidently going into decay. This arises no doubt from the fact that the Navajoes, the hereditary enemies of all Pueblo Indians, are no longer hostile, and the Pueblos are thus permitted to leave their strong places and scatter in the valleys. Soon after leaving Laguna we entered the valley of the Rio Grande, occupied here and there by squalid Mexican ranches, with fields still plowed with a forked stick, and cultivated in the same primitive and shiftless manner; the consequence is that poor crops are the rule. Crossing the river the track leads up the eastern side to Albuquerque. Here we were met by a committee of reception, who took us in carriages around the place and pointed out to us the places of interest, the chief of which were town-lots of fabulous value. Speculation has of late been on the rampage here, but is now subsiding, leaving many to estimate their wealth by imaginary values.

The committee of reception dined us at the Pico House, after which we went to the rooms of the Aztec Club, where a great many of the citizens paid their respects to the General.

We slept aboard of our car, but next morning changed to the regular train, which carried us to Santa Fé. The morning was frosty and cold, and the mountains covered with new-fallen snow. At Santa Fé we were met at the depot by General Mackenzie, who took us in his carriage to the Palace Hotel. Next day being Sunday we rested, but took advantage of the time to look around this quaint old town. Some efforts have been made to modernize it, but it still remains to all intents and purposes the same old Mexican town. We visited the exhibition building of the celebration last summer of the three hundred and thirty-third year of the founding of the city, and saw still remaining a fine mineralogical collection, among which were remarkable blocks of bituminous coal and fine specimens of coke.

On the following morning, September 17, we started in ambulances for Espanola, distant 28 miles. The road was sandy, but otherwise good. On the way we met *burros* loaded with grain, fruit, vegetables, and fagots of wood for the Santa Fé market. Jackass packing is the

native mode of transportation in this country, and the streets of the towns are crowded with these animals. At the crossing of Nambe Creek is a considerable ranch, owned by a Frenchman by the name of Bouquet, a soldier a long time ago of the United States service. His extensive fields of wheat and corn testify to what the country is capable of producing under proper cultivation.

At Espanola we found a special car, with a locomotive and dining-car all placed at the disposal of the General by Mr. D. C. Dodge, general manager of the Denver and Rio Grande Railway. On account of some railroad squabble this road is not allowed to approach the Atchison, Topeka and Santa Fé nearer than to Espanola. Hence the break. We were taken in charge by Mr. Andrews, who accompanied us until we finally reached Denver. Leaving Espanola we followed up the valley of the Rio Grande for a short distance, and then up the wild and rocky gorges of the Comanche, a tributary of the Rio Grande. This was our first experience with narrow-gauge railroads, and greatly were we astonished at beholding their capabilities for climbing mountains, passing cañons and gorges, clinging to the edges of precipices and overcoming steep grades. The engineer skill displayed is simply marvelous. In fact, more is due to engineering than to construction.

Upon leaving Comanche Cañon, the road winds up over the divide to Los Pinos Creek, upon which is situated the small town of Antonito. Here a branch of the road which we took strikes off to Durango and Silverton. Toward evening we were in the Taltec Gorge, winding along the edge of a precipice overlooking a stream rushing at a giddy depth below. A shower of rain was passing and a rainbow appeared, which, owing to the clearness of the atmosphere at so great an elevation, was brilliant beyond expression. One end of it extended into the abyss below, and so great was the depth the rainbow turned, forming the segment of an inverted arc. At the highest and most projecting point stands a beautiful monument to Garfield. It is of light-colored, fine-grained sandstone, with tablets of polished red granite. The inscription informed us that it had been erected by the employés of this railroad. From the Taltec Gorge the road passes over a divide to the headwaters of the Chama, another place of gorges and cañons, and soon after it commences to wind up the Continental Divide to the waters of Navajo Creek, a tributary of the San Juan, which flows into the Colorado of the Gulf of California. This divide has an elevation of 9,500 feet, much of which has to be overcome in a very short horizontal distance, and it is curious to see how the road winds around the head of gorges and ravines to accomplish it. What we saw here was but a specimen of many other climbs equally great. This divide is called the Atlantic and Pacific, and when we reached the summit we found it to consist of a vast rolling plateau, covered to a great extent with piñon and occasional patches of pine forest. Some of this plateau is, however, open prairie with good grass, affording fine summer grazing. We saw several large flocks of sheep, and occasionally passed a lonely ranch by the wayside.

We arrived at Durango before daylight next morning. This is a thrifty town of about 3,000 inhabitants, and the business center of San Juan mining district. Bituminous coal of the best quality abounds here; in fact, this mineral is found everywhere in Colorado. About 9 a. m. we started in an ambulance for Fort Lewis, distant, in a southwest direction, 12 miles. The road follows up a small tributary of the Animas, and then, crossing a divide of considerable elevation, descends to the Rio de la Plata, upon which the post is situated. While ascend-

ing this divide we had an extensive view of the grand scenery surrounding us. The mountains are covered with scrub oak, interspersed with small aspens, which, having been touched by frost, presented the most brilliant and harmonious coloring. From this on throughout our journey we had this same gorgeous display. The post of Fort Lewis is situated in the narrow valley of the Plata, which is inclosed on either side by low plateaus. The Plata is a good-sized creek, and affords water for irrigating the post and the gardens. The site of the post is quite level. Looking up the valley the Plata Mountains are seen; in the opposite direction, but at a great distance, are seen the San Juan ranges, in which are the ancient cliff dwellings so much written about. The post has an elevation of 7,900 feet above sea level, and is the highest military post in the United States. Its garrison consists of the headquarters and five companies of the Twenty-second Infantry, under the command of Major Hall, General Stanley, the permanent commander, was temporarily absent. The post is comparatively new and unfinished; nevertheless the garrison, both officers and men, are comfortably quartered, and the work of completion is going on with energy. The post has a first-class steam saw-mill, and there is an abundance of fine timber close at hand. The companies have, notwithstanding the great elevation, most excellent gardens. Colorado, and this post in particular, is celebrated, and justly, too, for its potatoes. About 2 miles below the post were encamped two troops of the Ninth Cavalry, being here from their post, Fort Riley, Kansas, on temporary duty. Late in the evening we returned by moonlight to our car at Durango, and remained there until morning, so as to have daylight for our trip to Silverton.

The road, in leaving Durango for Silverton, follows up the valley and cañons of the Rio de las Animas, a tributary of the San Juan. Soon after starting the mountains open out, leaving a valley about a mile wide, and some fifteen long, every rood of which is under cultivation in fields and gardens, presenting a most beautiful sight. At the head of this valley the mountains again close in and the road follows a cañon. This is one of the characteristic cañons of the country. It is a gorge with a stream rushing through it over rocks and bowlders. The sides are rough walls of rocks, almost perpendicular, and of vast height. Through this defile the railroad winds its way, a marvel of engineering skill. For a considerable distance the track, cut from the solid face of the cliff, is several hundred feet from the torrent below. In places the roadway is supported by a wall, over the edge of which we look from the car to the chasm below. One involuntarily shrinks back and clings to the railing of the platform. There being no footing in which to plant telegraph poles, the wires are sustained by iron bars, set, like brackets, in the rocky faces of the cañon.

Silverton is essentially a mining town, with a permanent population of about 2,000. The floating population is difficult to estimate, and varies with the season of the year. In the winter the miners who have been prospecting and working through the country gather here in large numbers and make things lively. The town has an elevation of 9,500 feet, and is situated in a pocket of mountains that completely surround it, and rise above it to a great height. It occupies the principal part of a gently sloping plain through which the Animas flows, affording an abundant supply of excellent water; the water flows along the sides of the streets. Although only three or four years old, the place boasts of numerous fine brick buildings, and many neat cottages. It is the center of the rich San Juan silver mining district, and contains several reducing and

sampling works. We visited one of the sampling establishments. Here the ore is received by wagon loads from the mines, and is crushed into coarse sand by machinery. Its value per ton is then determined by assay, and it is sacked up ready to be taken to the reducing works, where it is sold by the ton at prices regulated by the assay.

During the afternoon we returned to Durango and proceeded on towards Pueblo, recrossing the Continental Divide. As far as Antonito, the road is the same we had passed over, already described. At daybreak we were in the Veta Pass. This pass is the divide separating the waters of the Rio Grande from those of the Arkansas. After leaving the pass, the country opens out into the great plains of the Arkansas. Herds of cattle were seen on the way and occasionally ranches. The road crosses the valley of the Huerfano, and after following the Greenhorn for some distance cuts across to the Arkansas, on which Pueblo is situated. Upon arriving at Pueblo we were conducted by Mr. Graham, secretary of the Colorado Coal and Iron Company, to the Bessemer Steel Works of the company. These works are very extensive and very perfect in every appointment. Here we witnessed and had explained to us every operation of manufacturing Bessemer steel, from the crude ore as it comes from the mine to the rail ready for the track. Every material necessary for this—ore, coke, and flux—except only spiegel, is owned by the company. Spiegel has to be imported; but the company are now experimenting with an ore from which they expect to produce it themselves.

From the steel works we drove to the Pueblo Smelting and Refining Works, and saw the process of reducing silver ore to the condition of base bullion.

Pueblo is an important business place of about 18,000 inhabitants. It is a well-built city. The old adobe Mexican pueblo, from which it takes its name, is gone—swept away by a superior civilization. During the evening many veterans of the war and a number of the prominent citizens of the place called upon the General in his quarters in the car.

Next morning, September 21, we started for Salt Lake, and in a couple of hours were at Cañon City, at the entrance of the Great Cañon of the Arkansas. Up to this point the bottom land of the Arkansas is from 2 to 3 miles wide, and much of it under good cultivation, principally in corn. The Grand Cañon is 30 miles long, the first 8 of which is a gorge only 20 to 30 yards wide, with perpendicular sides of rock 3,000 feet high. The Arkansas is generally a broad river, but through this cañon is so contracted that a cat could jump across it, and rushes through its rocky trough with turbulent rapidity. In some places the jagged granite so overhangs the chasm as to make the sky, seen from below, appear as only a blue streak. The cañon is barely wide enough for the contracted river and the track of the road. In many places the latter has been blasted from the solid rock, and in one place there is not room enough for even this, and the track is suspended above the river from iron rafters that have footing in the rocky sides. After passing this gorge the cañon opens out so as to allow, here and there, room enough for a house and small garden for a railroad watchman. After emerging from the cañon we catch glimpses of the Sangre de Cristo Mountains, the crests of which were covered with new-fallen snow, and in a little while we reached the pretty village of Salida, where a railroad branches off to Leadville. From Salida the road follows for some distance the South Fork of the Arkansas. The main branch of the stream goes in the direction of Leadville. The road here ascends rapidly to Marshall's Pass. The grade in some places is as

much as 211 feet to the mile. The Marshall Pass is on the Continental Divide, and leads from the waters of the Arkansas to those of the Gunnison. The pass has an elevation of 10,300 feet, the highest point yet reached by us, and is said to be the greatest altitude surmounted by rail in the United States. We felt the effects of this altitude uncomfortably. The mountains about the pass, although steep and broken into ravines, are nevertheless sufficiently rounded and covered with earth to give root-hold to a good growth of trees and bushes. The road in reaching the pass winds around the sides of the mountain and the heads of ravines in the most astonishing manner. In one place it twists entirely around the top of a detached knob. Sometimes several loops of the windings occur many feet, one above another, and all so close together that a pistol-shot fired from above would range over the whole. From a watering tank at the foot of the ascent, looking up to the crest of the pass, we saw a long train of freight cars descending. It appeared like a great crawling monster, wantonly disporting itself among the bushes and rocks of the mountain side. Unlike most mountain passes this has little or no plateau, but commences at once to descend upon the other side. The effect of the altitude upon us was quite unpleasant, and we were glad to return to a lower level. The scenery of this day's journey was simply sublime.

In descending from the pass we came to a small stream which enlarges as we proceed, and the mountains opening out we enter upon a wide and level valley. In the center of this valley stands the town of Gunnison, the most conspicuous object in which, as seen from our car, is a huge hotel. The valley of the Gunnison is not cultivated except for hay. Twenty-six miles from Gunnison we passed Sapinero, and soon after entered the Black cañon of the Gunnison. This cañon is about 12 miles long, and is similar in every respect to the Arkansas cañon, except that the walls are not so high. The Gunnison was so named after Captain Gunnison, of the Army, who, while exploring for a railroad route to the Pacific through this region in 1853, was foully murdered, some say by Indians and others say by Mormons. Soon after emerging from the cañon the road takes to the valley, or rather gorge, of the Cimarron, a small tributary of the Gunnison. A few miles farther on it strikes over the divide to Cedar Creek, a small branch of the Uncompaghre. Here we enter upon a bare and barren country, producing little more than sage brush, and scarcely that. Proceeding a little further we come to the sterile valley of the Uncompaghre, relieved from utter barrenness only by a narrow strip of fertile land along the stream, upon which was a fringe of willows and cottonwood. Looking to the left we saw, at a distance of 20 or 30 miles, the Ouray Mountains, the most magnificent yet seen by us. The sun was setting behind them, and their crests, serrated into every possible form, made a gorgeous picture. At the junction of Cedar Creek and the Uncompaghre stands the forlorn town of Montrose, soon after passing which the night closed in and we saw but little more of this barren waste.

At the crossing of Green River a large group of rough-looking characters had assembled with drum and fife to do honor to the General. They were clamorous to see him by the light of their lanterns, and were not slow to inform him that they wanted a military post established there; they wanted protection from the Indians, they said. The General ridiculed the idea of such a lot of stalwart fellows wanting protection from a few miserable Indians. The ludicrousness of the idea struck them, and amid their shouts and laughter we steamed away. During the night we crossed the Grand River and its valley of desolation.

During our stay at Denver we visited Argo, the smelting and refi works of Senator Hill. These are said to be the largest and most c plete of their kind in the United States and perhaps in the world. establishment is a model of system, order, and neatness. The Sen showed us the whole operation of reducing silver from its state of to that of a chemically pure article in the form of ingots; these in average 125 pounds each. The peculiar process employed in this es lishment is largely chemical, and as the Senator in early life had b professor of chemistry in Brown University, his explanations were lu instructive, and highly interesting.

We remained at Denver until the evening of the 28th, when we t passage on the Union Pacific road and started for Kansas City, wh place we reached on the following afternoon. After a stop of an h taking passage on the Missouri Pacific, we started for Saint Louis, wh we arrived on the morning of the following day, September 30.

Here the General met his family, who were already established in house where he proposes to reside after his retirement in February n This was virtually the end of our journey, for here our party separa each traveling on his own account. Up to this point it had occu one hundred and two days, and upon again reaching Washingto numbered 10,767 miles.

Attached is a list of the distances between the principal points of route traveled by us. It includes the winding of the National Park the branches to Leadville, Silverton, and other places.

Very respectfully, your aide,

JNO. C. TIDBALL,
Colonel and Brevet Brigadier-Genera

General W. T. SHERMAN,
Commanding United States Army.

From Washington City to Buffalo	
Buffalo to Duluth	1
Duluth to Fort Snelling	
Fort Snelling to Fort Ellis	1
Fort Ellis to Lower Geyser Basin	
Lower Geyser Basin to Beaver Cañon	
Beaver Cañon to Missoula	
Missoula to Cœur d'Alene	
Cœur d'Alene to Old Fort Colville	
Old Fort Colville to Osoyoos	
Osoyoos to Fort Hope	
Fort Hope to Victoria	
Victoria to Vancouver	
Vancouver to San Francisco	
San Francisco to the Needles	
Needles to Santa Fé	
Santa Fé to Salt Lake	1
Salt Lake to Denver	
Denver to Saint Louis	
Saint Louis to Washington	
Total number of miles	1(

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General W. T. SHERMAN,
Commanding United States Army.

From Washington City to Buffalo	445
Buffalo to Duluth	1,096
Duluth to Fort Snelling	163
Fort Snelling to Fort Ellis	1,067
Fort Ellis to Lower Geyser Basin	166
Lower Geyser Basin to Beaver Cañon	103
Beaver Cañon to Missoula	351
Missoula to Cœur d'Alene	240
Cœur d'Alene to Old Fort Colville	324
Old Fort Colville to Osoyoos	81
Osoyoos to Fort Hope	141
Fort Hope to Victoria	156
Victoria to Vancouver	251
Vancouver to San Francisco	763
San Francisco to the Needles	840
Needles to Santa Fé	660
Santa Fé to Salt Lake	1,230
Salt Lake to Denver	858
Denver to Saint Louis	922
Saint Louis to Washington	910
Total number of miles	10,767

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RT ON TRANSCONTINENTAL RAILWAYS, 1883.

By Col. O. M. Poe, United States Engineers,
A. D. C. and Brevet Brigadier-General.

LETTER OF TRANSMITTAL.

Headquarters of the Army,
Washington, D. C., October 1, 1883.

n compliance with your instructions, I have prepared the accom-
paper upon the history and construction of the transcontinental
, and incidentally referred to the past and future uses of the
ystem of this country for military purposes. In the course of
ration, I have obtained a great deal of information, which is
ght together for the first time. In its bearing upon military
s, the paper of General Gaines is one of the most interesting,
of the early date when his views were presented, and their
lity to subsequent events. It was no ordinary mind that con-
he project proposed by him, small though the amount of his
00 may seem when compared with the $7,000,000,000 now in-
railway property in the United States alone.
panying this paper, is one marked F, entitled "The Pacific
Lines," prepared by Mr. Thomas J. Walker, of the office of the
ioner of Railroads, in the Interior Department, which contains,
lensed form, information of much value.
transmit a map, upon which the lines of "Explorations for a
route to the Pacific" are shown in *red*, and the lines, as con-
, in *black*, thus affording a ready means of comparison.
t expressions of opinion, there is nothing original in the paper
repared. The information has been gained from many sources,
nt among which are:
tney's Project for a Pacific Railroad."
fic Railroad Reports." (13 vols.)
Pacific Railroads." (Atlantic Monthly, December, 1867.)
Building of the Iron Road." (Overland Monthly, May, 1869.)
ornia Overland Railways." (Overland Monthly, January, 1875.)
Pacific Railroad." (North American Review, June, 1879.)
's Railroad Manual."
ory of the Northern Pacific Railroad." (E. V. Smalley.)
s Congressional reports and papers.
cript information from several railroads.
ts of the Commissioner of Railroads.
many instances whole paragraphs have been used just as written
authors. This has been especially the case with portions of
rt of Secretary Davis to Congress, dated February 27, 1855.
tire transcontinental system has grown up since 1862, and all
ept the Union and Central Pacific line since 1869.
4 heavy freight could be sent by sea from New York to San
o for $20 per ton.
1872 to 1879, both inclusive, the average rate per 100 pounds
niles on through freight over the Union Pacific Railroad was
and over the Central Pacific 10 cents. This shows that the
tation by sea was much cheaper.
hen the question concerns transportation by land alone, which

is of most importance to us, the case is very different. Taking the route from Fort Leavenworth to Fort Union, for example, the average cost by wagon per 100 pounds per hundred miles for the sixteen years from 1855 to 1870, both inclusive, was $1.77, whilst by rail it is now less than a tenth of that amount. This represents the relative cost of wagon and railway transportation, bearing in mind that any variation is always such as to show more strongly the advantage of railway transportation. In some cases transportation by wagon is twenty times more costly than by railway.

Hereto attached are four tables (marked A, B, C, and D) recently prepared in the office of the Quartermaster-General, which contain valuable statistics on this point, and a table (E) prepared in the same office in 1854.

The connection of the Army with the development of the system of transcontinental railways has been direct, and the assistance rendered has been of great value, a fact which has been always admitted by those engaged in the construction. The first exploring party sent into the field for the special purpose of ascertaining the feasibility of constructing a railway on a portion of the line of one of the transcontinental routes was that under charge of Captain Warner, of the Topographical Engineers, which was organized and set in motion by orders conveyed by yourself in 1849. All the explorations from that time on until 1855, including all the present transcontinental routes, were conducted by Army officers, with the single exception of the northern route, the exploration in that case being under the direction of an ex-officer. However, all these explorations were in charge of graduates of the Military Academy, and the results of their labors prove how zealously and efficiently they were conducted.

Two of the leaders, Captains Warner and Gunnison, were killed by hostile Indians, and all endured every hardship. But it was not alone officers of the Army who gave efficient service to this work. Civil assistants were largely employed, and amongst them we find the names of many who afterwards became prominent in other directions because of the very qualities displayed by them in this work.

The explorations finished and the work of construction begun, the labors and privations of the troops were greatly multiplied. The Union Pacific (both branches), a considerable portion of the Northern Pacific, part of the Atchison Topeka and Santa Fé, and, to some extent, the Southern Pacific railroads, were built directly in the face of hostile Indians. An enumeration of the combats with this foe would be startling in its length. The loss of life which actually occurred was far beyond what is supposed. But it was not warfare with the savages that was most trying to the soldiers; it was the necessity for constant watchfulness, the subjection to every hardship, the generally unwholesome way of living, and the feeling that the lives of many unarmed laborers depended upon them, that told most severely. It is not to be inferred that without the aid of the Army the roads could not have been built, but the work was rendered much easier and the time shorter through the assistance of the soldiers, given without extra reward, or hope of reward, beyond the feeling of satisfaction in contributing their share to the advancement of the general welfare.

I have the honor to be, very respectfully, your obedient servant,

O. M. POE,
Lieutenant-Colonel of Engineers, Col., A. D. C.,
Brevet Brigadier-General U. S. A.

General W. T. SHERMAN,
Commanding United States Army.

REPORT.

HISTORY.

In 1830 there were 23 miles of railway in operation in this country. In 1831, 72 miles were added; 134 miles in 1832; 151 miles in 1833; 253 miles in 1834; 465 miles in 1835, and 175 miles in 1836, when the total amounted to 1,273 miles. Of this total, 630 miles, or almost exactly one half, had been built in the two years 1835–'36; and railroads and railroad matters had begun to somewhat prominently engage the attention of the people.

The tracks were composed of mere straps of iron, fastened to longitudinal string pieces, and quite incapable of heavy traffic.

The first locomotive used in the United States was constructed in England by Foster, Rastrick & Co., and imported in 1829. It was called the "Stourbridge Lion," and was intended for use upon the Carbondale and Honesdale Railroad, belonging to the Delaware and Hudson Canal Company. Though weighing but a small fraction of the weight of our present first-class locomotives, it was found to be too heavy for the track as then constructed, and was abandoned.

The first locomotive built in this country, and the second ever in use in it, was made at the West Point Foundry Works, in 1830, for the South Carolina Railroad, then in process of construction. It was named "The Best Friend of Charleston." It arrived at Charleston on the 23d of October, 1830, and was placed on the road November 2. The second engine constructed in this country was by the same establishment and for the same road. The third, also constructed by the West Point Foundry, was placed on the Mohawk and Hudson, now a part of the New York Central Railroad, in 1831. It weighed three tons, and was used on the summit between the two inclined planes. An English locomotive, weighing six tons, was imported for use at the same place, but was found to be too heavy for the track, and its use was discontinued.

Such were the engines, and such the character of the railroads in existence when the subject of their use, for military purposes, first engaged attention; and when their extension across the continent was broached.

It would now be impossible to ascertain who was the first to suggest the construction of a railway to connect the eastern portion of our country with the Pacific coast. It is probable that the idea in some form occurred to several persons. Very recently, Mr. E. V. Smalley, in his "History of the Northern Pacific Railroad," has presented the claim of Dr. Samuel Bancroft Barlow, of Granville, Mass., to this distinction, details the evidence upon which the claim is founded, and shows that as early as 1834 (possibly in 1833) Dr. Barlow advocated the construction of a railroad from New York to the mouth of the Columbia River, by direct appropriations from the Treasury of the United States. But in presenting this claim to priority, is it not possible that the fact has been overlooked that Dr. Barlow's paper in the Intelligencer (of Westfield, Mass.) was called forth by a series of articles upon the same subject, published in the Emigrant, of Washtenaw County, Michigan Territory? And is not, therefore, that unknown writer of those articles really entitled to whatever credit attaches to priority of suggestion?

In 1836 John Plumbe, a Welshman by birth, an American by education and feeling, a civil engineer by profession, at Dubuque, Iowa,

called the first public meeting for the purpose of agitating the subject of building a transcontinental railway. From that time until his death, in California several years afterwards, he was an ardent advocate of the project. When Plumbe first broached his project at Dubuque there were scarcely any railroads, and in the States west of the Ohio only sparse settlements. Not one line of railroad had been finished between the Atlantic and the great interior basins. The population, business, and internal improvements of the United States were confined to a region from Canada to the Gulf, scarcely 1,000 miles wide; and west of that lay 2,300 miles of vacant territory, which must be traversed to realize the dream of a Pacific railroad; and our possessions upon the Pacific were limited to an inconsiderable portion of the coast, occupied by a feeble colony. So far as we can now ascertain, Plumbe's project had in view the development of the country, and the advancement of our commercial interests. It was not discussed with reference to its bearing upon military questions. But there were other minds which foresaw the important relations which railroads in the future would have to military operations.

The proposition must have seemed to most people chimerical in the superlative degree, but it produced fruit. In 1837 Dr. Hartley Carver published in the New York Courier and Enquirer, an article advocating the construction of a Pacific railroad. The discussion of the subject, limited though it was, gradually secured adherents, until we find the matter referred to in the Senate of the United States in the session of 1842–'43, whilst the "Oregon question" was under consideration, when Senator Sevier held that not only lands should be granted to settlers, and forts built and garrisoned for their protection, but if necessary a railroad should be made from the Missouri to the Columbia, over which immigrants might be conveyed in two or three days. Senator Linn dwelt upon the facility with which travel and transportation might be effected across the continent, "by means of ordinary roads at present and by railroads hereafter."

Senator McDuffie opposed these projects for the encouragement of settlers, and ridiculed the idea that steam could ever be employed to facilitate communication across the continent between the Columbia countries and the States of the Union.

In the spring of 1844 Mr. Asa Whitney embarked from China for New York, under the determination to devote his life to the work of establishing a means of cheap and easy communication across our continent, between the 250,000,000 of European population on one side of us and all Asia with its 700,000,000 of people on the other, believing that it promised much good to all mankind, not doubting that in due time he could satisfy his countrymen of its feasibility and vast importance, and gain their assent to its accomplishment.

At the second session of the Twenty-eighth Congress (*i. e.*, in the winter of 1844–'45) he memorialized Congress upon the subject. His memorial was referred to a committee in each House, and it was favorably unanimously reported upon, the Hon. Stephen A. Douglas being one of its advocates in the House of Representatives.

In 1845 he examined on his own account and at his own expense, more than 800 miles of the route, as well as 1,500 miles of the Missouri River and other streams, to ascertain where they could be bridged, the facilities which the country might afford, and the value or availability of the lands; Colonel Frémont in person and the statements of others had satisfied him of the feasibility of the whole route.

At the beginning of the first session of the Twenty-ninth Congress

(December, 1845) he again presented a memorial in regard to the matter, which was referred to the Senate Committee on Public Lands (Mr. Breese, chairman. Mr. Woodbridge, Mr. Morehead, Mr. Ashley, and Mr. Chalmers). The chairman prepared a report, which was unanimously adopted by the committee and reported to the Senate, together with a bill to carry out the project. (The proposition had gained much strength in the three years which followed the discussion of the "Oregon question.")

During the first session of the Thirtieth Congress (March 17, 1848) he again presented a memorial, which was referred to a select committee in each House. The House committee reported a bill to carry the project into effect. A bill (not identical) was also reported by the Senate committee. In each case the action of the committee was unanimous. (The favorable sentiment had increased.) But the Senate bill was laid on the table by the close vote of 27 to 21, and the House did not reach its bill. Mr. Pollock, from the House select committee, used the following language:

> The proposition, at first view, is a startling one. The magnitude of the work itself, and the still greater and more magnificent results promised by its accomplishment, that of revolutionizing, morally and commercially, if not politically, a greater part of the habitable globe, and making the vast commerce of the world tributary to us, almost overwhelms the mind. But your committee, on examination, find it a subject as simple as it is vast and magnificent, and see no insurmountable difficulties in the way of its successful accomplishment.

The short session, beginning in December, 1848, was occupied with other matters, which were considered, at the time, of more pressing moment.

To Mr. Whitney undoubtedly belongs the credit of having first formulated a practicable scheme for the construction of a transcontinental railway. When he began his active work in connection with the project, our Oregon possessions were all we controlled on the Pacific coast, and the location of the western terminus was limited accordingly. His eastern terminal point was at Saint Joseph, on Lake Michigan. Two and a half years afterwards, when he presented his third memorial, we were in possession of all the coast from the Straits of Fuca to San Diego, and the western terminus might be anywhere within those limits.

Mr. Whitney asked the aid of Government to the extent of a sale to him of public lands, at a reduced price, for 30 miles on each side of the located line. The House bill fixed 10 cents per acre as the price to be paid by Mr. Whitney.

In the fall of 1849 "a Pacific railroad convention met at Saint Louis, and was presided over by Stephen A. Douglas. * * * Whitney's last map, as shown to this convention, marked out a route from Chicago by way of Prairie du Chien, Council Bluffs, and the South Pass, to Snake River, down that stream to Fort Walla Walla, and thence across the Cascade Mountains to Fort Nisqually, on Puget Sound." J. Loughborough, a Saint Louis lawyer, presented, as a compromise, a project for a line "from Independence, Mo., to the South Pass, and thence by way of the Humboldt River to California, with a branch to Oregon and termini at Yaquina Bay, Fort Vancouver on the Columbia, and Fort Nisqually on the Sound."

The Saint Louis convention condemned Whitney's project.—(Smalley.)

About 1847 Dr. Carver also memorialized Congress. He found Mr. Whitney already upon the ground, and actively pushing his views. Although the time was not ripe for the adoption of a national measure

so grand in its scope, and statesmen regarded their schemes as the dream of enthusiasts, rather than the coolly-conceived project of great minds, yet their arguments were not fruitless. Constant and rapid accessions of support were gained, until the measure was defeated in 1848 by only a bare majority. The time had passed for men to ridicule such a proposition, and the defeat of the bill can only be attributed to the magnitude of the project. Legislators were timid, not unbelieving. The country did not yet realize the immensity of its resources, and the proposed national aid, if rendered, would make a serious drain upon them. A considerable number of our legislators, at that time, were of opinion, too, that the Constitution did not warrant such an application of the public domain. Notwithstanding all this, the legislatures of nineteen States passed resolutions in favor of the adoption of Whitney's plan. In most of these cases the vote was unanimous, or nearly so, and in the others the favorable majority was large.

By the treaty of Guadalupe Hidalgo, signed on the 2d of February, 1848, the war which had existed between the United States and Mexico, for nearly two years, was terminated, and that portion of the Mexican province of California, comprised between the southern boundary of Oregon and a point just south of the post of San Diego was ceded to the United States. Almost simultaneously with this, came the discovery of gold at Sutter's Mill, within this ceded territory. The fact soon became known to the world, and a vast number of the most earnest adventurers, and enterprising men from the rest of our own, and even from foreign countries, started in search of fortune. Some portion of this migration reached California in the latter part of 1848, but it was not until 1849 that the great influx arrived. By whatever route they came, much time was consumed, and every hardship endured. Thousands never lived to complete the journey. The difficulties and dangers of all the lines of communication with the outer world were so manifest to them, that almost with the first arrivals appeared a determination to secure improvement in this regard, and, as a consequence, on the 13th of August, 1849, a party under the direction of Capt. W. H. Warner, Corps of Topographical Engineers, United States Army, under instructions conveyed to him by Lieut. (now General) W. T. Sherman, left Sacramento, Cal., intending to survey as far as Humboldt River, for the purpose of finding a practicable railroad route through the Sierra Nevada. While engaged upon this duty on the 26th of September, 1849, Captain Warner was killed by Red River Indians on the eastern side of the Sierra Nevada. His notes and other papers were preserved, however, and subsequently used. They extended as far as Goose Lake. He was accompanied upon this exploration by Lieutenant Williamson of the same corps.

The instructions by the Department of State, to the commissioner, for running and marking the boundary line between the United States and Mexico, under the treaty of Guadalupe Hidalgo directed an examination of the country contiguous to the line to ascertain its practicability for a railway route to the Pacific. The boundary, as agreed upon by the two commissioners representing the two countries, fixed the initial point in the Rio Grande in latitude 32° 22′, instead of a point as laid down on the treaty map, about 8 miles above El Paso. This was disapproved by the astronomer and surveyor on the commission at the time, and was eventually repudiated by the Government. The boundary line, as finally determined and established under the treaty of Guadalupe Hidalgo, extended up the Rio Grande from its mouth to latitude 31° 54′ 40″ north; thence west along that parallel to the meridian of 109° 37′ west; thence due north to the Rio San Domingo; thence

down that stream to the Gila; thence down the Gila to its mouth; thence in a straight line to the point on the Pacific, in latitude 32° 32′ north (Warren). This treaty, entered into in 1848, at the close of the war with Mexico, was made before the agitation of the subject of a transcontinental railway had become so prominent, yet the question received some consideration, as by Article VI it is provided that

If by the examinations which may be made, it should be ascertained to be practicable and advantageous to construct a road, canal, or railway which should in whole or in part run upon the river Gila, or upon its right or its left bank, within the space of one marine league from either margin of the river, the Government of both republics will form an agreement regarding its construction, in order that it may serve equally for the use and advantage of both countries.

The people of the southern portion of our country soon appreciated the necessity to them of a line as far south as the boundary would admit of. A slight inspection of recent maps will show that the boundary adopted was such as to make the construction of a railroad within it, but in its immediate vicinity, a work of great difficulty, whilst just south of it, the mountains generally drop into the plain with easy passes through the remaining ridges, in fact, as we now know, affording the easiest route from the Rio Grande to the Pacific.

As soon as these facts became known, negotiations were instituted for the purchase from Mexico of additional territory, resulting in what is generally known as the Gadsden purchase. Under this it was agreed that the boundary line should leave the middle of the Rio Grande.

Where the parallel of 31° 47′ north latitude crosses the same; thence due west 100 miles; thence south to the parallel of 31° 20′ north latitude; thence along the said parallel of 31° 21′ to the one hundred and eleventh meridian of longitu e west of Greenwich; thence in a straight line to a point on the Colorado River 20 English miles below the junction of the Gila and Colorado Rivers; thence up the middle of the said river Colorado until it intersects the present line between the United States and Mexico.*

All the other parts of the boundary line remained as provided in the treaty of Guadalupe Hidalgo. For this modification of the boundary, the United States paid to Mexico the sum of $10,000,000, and acquired the coveted Mesilla Valley route over which the Southern Pacific Railroad has since been constructed.

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* In 1846–'47 Maj. W. H. Emory, of the Corps of Topographical Engineers, United States Army, had passed over the region in question, from the Rio Grande to the Pacific Ocean, and gained much information in regard to its physical characteristics. Very early in 1849 he sailed for San Diego, Cal., to assist in running and marking the boundary line between the two countries, as established by the treaty of Guadalupe Hidalgo. Whilst crossing the Isthmus of Panama he seems to have had experience of such a character as to impress upon him the vital importance to us of a railroad to the Pacific. He was acquainted with the instructions of our Government to its commissioners, and feared that the initial point of the boundary would not be located sufficiently low down on the Rio Grande to secure a practicable railway route on our side of the line. Consequently, upon his arrival at San Diego, he wrote to the Secretary of the Interior, under date of April 2, 1849, as follows, viz:

* * * "The inaccuracy of the maps upon which the treaty was made, and which thereby became a part of the treaty, is notorious. It is also known to all who have been much in the frontier States of Mexico, that the boundaries of those States have never been defined on the ground, and are unknown. This is particularly the case of the boundary betwixt New Mexico and Chihuahua. In this condition of things the commissioners must negotiate, and they may adopt the thirty-second parallel of latitude until it strikes the San Pedro, or a more southern parallel of latitude. This would give what good authority combined with my own observations authorizes me to say is a practicable route for a railroad." * * *

It afterwards appeared that if this communication had been promptly acted upon, it "would have been the means of saving much controversy and expenditure of time and money."

Is it possible that it would have saved the whole Gadsden (or Mesilla Valley) purchase?

In 1850 William B. Ogden, of Chicago, convinced of the practicability of a transcontinental railway, gave the aid of his powerful influence to the agitation of the measure.

In 1851 Senator Gwin gave notice in the Senate of the United States of a bill for the construction of a Pacific railroad, and in 1852 Senator Stephen A. Douglas, chairman of the Committee on Territories, reported a bill on the subject.

With constant accessions of support from far-seeing and liberal-minded men, capitalists, statesmen, and soldiers the movement finally gained such momentum as to compel the Government to take action, and by making the necessary appropriation provide for beginning that magnificent series of explorations and surveys, which continued by subsequent appropriations, and aided by all the power of an enlightened executive, exercised through the military organization, was carried on for two years, and furnished so much valuable information. By this time the public mind was thoroughly aroused, and the publication of information was demanded. The result was that the publication of the thirteen quarto volumes known as the "Pacific Railroad Reports" was ordered by Congress, at an expense of hundreds of thousands of dollars.

The lines covered by these explorations have since been practically occupied by constructed roads. Their connection with this desirable result has been so direct and so important, that it is deemed proper to give them in some detail.

EXPLORATIONS AND SURVEYS FOR A RAILROAD FROM THE MISSISSIPPI RIVER TO THE PACIFIC OCEAN.

The first appropriation for this purpose was made by the tenth section of the act making appropriations for the support of the Army, approved March 3, 1853. By acts of May 31, 1854, and August 5, 1854, further sums were appropriated, aggregating in all $340,000. This was exclusive of such aid as could be given, without special appropriations, through the resources of the War Department, which must have more than doubled this aggregate.

The explorations and surveys covered five belts, usually referred to as: 1. The route near the forty-seventh and forty-ninth parallels. 2. The route near the forty-first and forty-second parallels. 3. The route near the thirty-eighth and thirty-ninth parallels. 4. The route near the thirty-fifth parallel. 5. The route near the thirty-second parallel. And they disclosed the fact that all the routes were practicable for the construction of a railway.

The following brief description of these several routes is largely taken verbatim from the final report of Hon. Jefferson Davis, Secretary of War, to Congress, dated February 27, 1855. In the endeavor to condense as much as possible much matter of general interest has been omitted, and only that used which describes the several lines. Those wishing to read the report itself will find it in the first volume of the Pacific Railroad Survey Reports.

For convenience the several routes will be given in their geographical order, beginning with the northernmost, and, in order to complete the history the account in each case will be carried through to the completed road.

ROUTE NEAR THE FORTY-SEVENTH AND FORTY-NINTH PARALLELS.

This route "was to cross the Rocky Mountains at the sources of the tributaries of the Missouri and Columbia Rivers, and, in approaching

and leaving the mountains, to follow as far as practicable the valleys of these rivers and their tributaries." The general direction of the requisite explorations was intrusted to Governor Isaac I. Stevens, of Washington Territory, late of the Corps of Engineers, United States Army.

Beginning at Saint Paul the route passed up the Mississippi River on its eastern side to Little Falls, 109 miles, where it crossed, and gaining the divide between the waters of Hudson's Bay and those of the Missouri, kept on this divide, and in longitude 103° W. approached within a few miles of the forty-ninth parallel; then passed southerly between the one hundred and fourth and one hundred and fifth meridian, and entered the valley of the Missouri River, which it followed to the mouth of Milk River; thence up the valley of the Milk River 187 miles, when it entered the prairies, continued along a line nearly parallel with the river across its tributaries, the Marias, Teton, and Sun Rivers, and entered either Clark's or Cadotte's Pass.

Thus far no portion of the route offered any great difficulty to the construction of a railroad. But from the Sun River to the Spokane, a distance of 365 miles, embracing the Rocky Mountains proper and a secondary chain lying west of them (called Cœur d'Alene, and the Bitter Root Mountains), serious obstacles were encountered.

Seven passes were explored through the Rocky Mountains, but it was only at two of them (Clark's and Cadotte's) that the information obtained was sufficiently complete to enable projects to be made. They lie near each other in latitude 47° and connect the headwaters of Dearborn River, a tributary of the Missouri, with those of the Blackfoot, a tributary of the Columbia.

The route by Clark's Pass required a tunnel of 2½ miles in length, at an elevation of 5,300 feet, with approaching grades of 50 feet to the mile. That by Cadotte's Pass involved a tunnel 4½ miles long, at an elevation 5,000 feet, with grades of approach of 60 feet. The former pass was the one considered in making the estimate.

From either pass the route sought the Blackfoot River in order to reach Clark's Fork, and two routes were examined. The first followed the Blackfoot to its junction with Hell Gate, a distance of 93 miles, then by the Hell Gate to its junction with the Saint Mary's, called below this junction the Bitter Root, and thence to Clark's Fork.

The other and shorter route followed the Blackfoot; but a short distance crossed to the Jocko, descended this to the Flathead, and the last to its junction with the Bitter Root, forming Clark's Fork. It continued along Clark's Fork to Lake Pend d'Oreille, which it left at the lower extremity, and without difficulty crossed to the Spokane. At the Spokane River the continuous mountain region and the forest terminate, and all great difficulties of location upon the route ceased.

Concerning the passes of the Rocky Mountains Governor Stevens remarked:

> It is not doubted there are other passes in this portion of the Rocky Mountain range, even better than those explored; they are indicated by the general depression of the mountain range, with the greater frequency of the streams stretching out to meet each other from the opposite slopes of the mountains; and I consider it important that in future operations a whole season should be devoted to their thorough examination, and that instrumental surveys should be made of the pass found to be the most practicable.

Leaving the Spokane the route entered the great plain of the Columbia and crossed it in a distance of 110 miles. At a distance of 140 miles from the Spokane, a suitable point for crossing the Columbia was reached. This point was about equally distant from the navigable

waters of the Pacific in Puget Sound, and in the Columbia River, the whole intermediate space being occupied by the Cascade Mountains, with but two passes reported practicable for a railroad, that of the Columbia River and that of the Yakima.

In the opinion of the officer who examined it, Capt. George B. McClellan, of the Corps of Engineers, United States Army, Yakima Pass was barely practicable, at a great cost.

The route by the pass of the Columbia followed that river from the great plain, being generally located as far as the Dalles in bottom lands, which presented no difficulties. From the Dalles to near Vancouver, 90 miles, the route was less easy, but deemed quite practicable.

The Columbia River is navigable for sea-going vessels to Vancouver, but because of the unfavorable character of the entrance, and the great superiority of the ports on Puget Sound, it was deemed expedient to adopt one of the latter as the Pacific terminus of this route. Therefore the route was continued without difficulty down the Columbia to the mouth of the Cowlitz, then up the valley of that stream and across the intermediate country to Seattle, on the east side of Puget Sound.

The principal favorable characteristics of this route were its low profile, low grades, the low elevation of the mountain passes, and its connection with the Missouri and Columbia Rivers. The principal unfavorable features were in construction; the tunnel required on the Rocky Mountains, and the difficulty and expense of construction from the eastern approach of the Rocky Mountains to the Spokane River, and the expense of the construction along the Columbia River from the Dalles to near Vancouver.

The severely-cold character of the climate throughout the whole route, except the portion west of the Cascade Mountains, was considered one of its unfavorable features; and, strange to say, its proximity to the dominions of a powerful foreign sovereignty was deemed a serious objection to it as a military road. (These views were advanced in 1855 by Hon. Jefferson Davis, then Secretary of War. Could there have been any stronger argument in favor of this route as a military highway than its proximity to the dominion of a single foreign sovereignty from the great lakes to the Pacific?)

Governor Stevens estimated the cost of a railroad from Saint Paul to Seattle, by the Columbia River Valley and the Cowlitz, at $117,121,000. The Secretary of War thought it safer to increase this estimate to $150,871,000, but added:

> Should Governor Stevens have included a full equipment in his estimate, $10,000,000 should be subtracted from this sum to bring the estimate in accordance with those of the other routes, and the cost then becomes $140,871,000.

The length of the route from Saint Paul to Vancouver was 1,864 miles, with sum of ascents and descents, as far as reported, of 18,100 feet, giving an equated length of 2,207 miles.

From Saint Paul to Seattle, by the Columbia route, was 2,025 miles. with an equated distance of 2,387 miles.

THIS ROUTE AS OCCUPIED.

This route has been occupied by the Northern Pacific Railroad, which, however, departs more from the route laid down by the exploring party than does either of the others. The fact must not be overlooked, however, that the Yellowstone Valley was examined. From the west end of Lake Superior two lines, each of about 24 miles in length, join at Northern Pacific Junction, and thence continue over the same track to

Brainard, where the line is joined by a railroad proceeding from Saint Paul; thence continuing westerly it crosses at Glyndon a line of railway from Saint Paul to Winnipeg, Manitoba, and at Jamestown sends off a branch to the northwest (branches to the south, or southwestward are not considered), toward the southerly bend of Mouse River. Crossing the Missouri at Bismarck it reaches the Yellowstone at Glendive; then following up the south bank of the Yellowstone it crosses it but few times, and finally leaves it a short distance west of Shield's River, and crossing the mountain at Bozeman's Pass by a tunnel 3,610 feet long, at an elevation of 5,565 feet, descends into the valley of the Gallatin (one of the branches of the Missouri) through Rock Cañon, and by a very direct route reaches the main chain of the Rocky Mountains at Mullan Pass, where it crosses by means of a tunnel 3,850 feet long, at an elevation of 5,547 feet, or 18 feet less than that at Bozeman's Pass. This pass is the one referred to by Governor Stevens, in his report, as not explored by him, but likely upon examination to prove better than either of the two passes which he did explore. It then continues down the Little Blackfoot to its junction with the Deer Lodge (the resulting stream being called the Hell Gate), thence along the Hell Gate to its junction with the Bitter Root (or Saint Mary's). Here it intersects one of the explored lines, and becoming coincident with it pursues that route through the Coriacan defile and along the Jocko to its junction with Clark's Fork of the Columbia, thence down that stream, and passing the northerly end of Pend d'Oreille Lake continues to follow the explored route via Spokane Falls and old Fort Walla Walla (now Wallula) to Portland, and thence via the Cowlitz Valley to Puget Sound at Tacoma.

In 1852 Mr. Edwin F. Johnson, an engineer of high reputation, warmly advocated the construction of a line of railroad along the northern route. In 1853, some years before the results of the Government explorations became generally known, he published a map and profile indicating a line from Chicago, with a branch from the head of Lake Superior joining it at what is now Breckenridge, on the Red River of the North, "crossed the plains to the Missouri, followed the north bank of that stream and the Dearborn River to the mountains, thence ran to Flathead Lake and Fort Colville, and ended at Bellingham Bay, on Puget Sound." This map had for its basis the results of the expedition of Lewis and Clarke, and was remarkably accurate, in view of the fact that no instrumental data were available for its construction.

But it was mainly to Governor Isaac I. Stevens that the country is indebted for the legislation that resulted in the building of the road. Being in Congress as a Delegate from Washington Territory, he had many opportunities to forward the interests of the project unavailable to others. He was earnest and zealous in his advocacy, and his personal influence with his fellow members such as to secure him a respectful hearing, thus enabling him to properly present a strong array of facts coming within his own knowledge. Except for his early death upon the battle-field, he would undoubtedly have taken a prominent part in the ultimate construction of the road.

The Northern Pacific Railroad Company was incorporated by an act of Congress approved July 2, 1864, entitled "An act granting lands to aid in the construction of a railroad and telegraph line from Lake Superior to Puget Sound, on the Pacific coast, by the northern route."

By this act the company was empowered to build a line of road from some point on Lake Superior, in the State of Wisconsin or Minnesota,

west on a line north of the forty-fifth degree of latitude, to a point on Puget Sound, with a branch to Portland, Oreg. It required the company to commence work within two years; to complete not less than 50 miles a year after the second year, and to finish the entire road by July 4, 1876. The land-grant was twenty sections to each mile of track in the States of Minnesota and Oregon, and forty in the Territories; and a vicious section was added to the effect "that all the people of the United States shall have the right to subscribe to the stock of the Northern Pacific Railroad Company until the whole capital named in this act of incorporation is taken up by complying with the terms of subscription, and no mortgage or construction bonds shall ever be issued by said company on said road, or mortgage or lien made in any way, except by the consent of the Congress of the United States," only to be repealed in 1870.

The conditions of the act were accepted by the company December 15, 1864, and on the 17th the President of the United States was notified thereof. This notification was acknowledged by the Department of the Interior on the 30th.

On the 9th of March, 1865, the Secretary of the Interior acknowledged receipt of a map, upon which was delineated the general line of the Northern Pacific Railroad, as adopted by the Board of Directors of that company, and a letter dated on the 6th of the same month requesting that the granted lands along the line be withdrawn from market.

Meanwhile but little progress was made towards beginning construction. Edwin F. Johnson was appointed chief engineer of the road in May, 1866. Systematic surveys at both ends of the road were begun in the summer of 1867, and the first general report of the chief engineer was made in November, but it was not until April, 1869, that the reports of the engineers in charge of the surveys at the two ends were ready for presentation, and no report was made to the Board of Directors until 1870, for the reason that there was no meeting between February, 1868, and February, 1870 (History Northern Pacific Railroad, page 160). By joint resolution of Congress of July 1, 1868, the time for beginning the work of construction was extended two years, and for completion one year, or from July 2, 1868, to July 4, 1877. Another joint resolution, approved March 1, 1869, granted the consent of Congress to the issue of bonds secured by mortgage upon the railroad and telegraph line, and defined the term "Puget Sound." An act of Congress approved April 10, 1869, authorized the "extension of its branch line from a point at or near Portland, Oreg., to some suitable point on Puget Sound, to be determined by said company," &c., and required the construction of at least 25 miles of the extension before July 2, 1871, and 40 miles per year thereafter.

By joint resolution of May 31, 1870, the company was authorized to issue its bonds, secured by mortgage upon "its property and rights of property of all kinds and descriptions, real, personal, and mixed, including its franchise as a corporation." It also authorized the location of the line via the valley of the Columbia River to connect with the branch line to Puget Sound; increased the land grant, and required the use of American iron or steel in the construction of the road.

The history of the financial operations of the company now becomes interesting, but, being entirely foreign to the purposes of this paper, is omitted, as it will be generally in speaking of the other roads.

Construction work upon the road began in the summer of 1870. "Detailed surveys were completed during the spring from Thomson's

Junction to the crossing of the Mississippi River, where a town was laid out, and named Brainerd."

In April a controlling interest in the Saint Paul and Pacific Railway Company was obtained.

This company had a considerable land grant, and was organized to build a system of roads extending from Saint Paul to the British line at Saint Vincent, and also to Breckenridge, on the Red River, and to Brainerd.

During the financial embarrassments of the Northern Pacific Company they sold this stock; the company went into bankruptcy, was reorganized under the name of the Saint Paul, Minneapolis and Manitoba Railroad Company, and now competes with its former owner for much of the traffic of the Red River region.

The East Minnesota Division of the Northern Pacific Railroad extends 114 miles from Duluth to Brainerd, where it joins the Saint Paul Division of 136 miles in length, the continuation of both lines being known as the West Minnesota Division, extending to Fargo, 138 miles. Ground was first broken on this division on the 15th February, 1870, at a point about a mile west of the present town of Northern Pacific Junction, where the Saint Paul and Duluth Railroad (then called the Lake Superior and Mississippi Railroad) joins the Northern Pacific. The Lake Superior and Mississippi Railroad was opened through from Saint Paul to Lake Superior in the summer of 1870, and became the supply line for the construction of the Northern Pacific, which acquired a half interest in the 23 miles of road from the junction to Duluth.

The work of construction went bravely on, but it was not until November 21, 1871, that a map of definite location of a part of the main line was filed in the General Land Office, "from a junction with the Lake Superior and Mississippi River Railroad in Sec. 7, T. 48 N., R. 16 W., Minnesota, to the Red River of the North." The affidavit of the chief engineer of the company, showing the completion of the road to the Red River, 228 miles, was filed in the General Land Office October 5, 1871. Of this distance the portion from Northern Pacific Junction to Brainerd, 91 miles, was built in 1870, and the remaining 137 miles in 1871.

It was not until August, 1871, that the location of the crossing of Red River was finally settled. It was determined by the nature of the approaches. A town was laid out upon either bank, that upon the east being named Morehead; the other, Fargo.

The Dakota Division begins at Fargo and extends 200 miles to Mandan, on the west bank of the Missouri. The work of construction was begun in the spring of 1872, and by the end of the season the track had reached Jamestown, a distance of 94 miles. During the spring and summer of 1873, the track, crossing the Coteaux at an elevation of 1,850 feet above the sea, reached the east bank of the Missouri, 102.4 miles further, where a town was laid out and called Bismarck. The affidavit of the chief engineer, testifying to the completion of the road to the Missouri, 196.4 miles, was filed in the General Land Office October 7, 1873. The division was operated at a loss during the first winter, and during the second trains were only run as far as Jamestown.

The financial condition of the company now became so low that the road advanced no further until 1878. The connection with the Missouri River navigation was of great importance, however, not only to the road itself, but in greater degree to the people who were beginning to settle the country to the north and west of Bismarck, as well as to the Government posts and Indian agencies on the Upper Missouri and Yellowstone, and even the remote mining towns in Montana.

The Missouri Division extends from Mandan to Glendive, on the Yellowstone, a distance of 216 miles. Its construction was begun early in 1878, advantage having been taken of the ice-bridge in the winter to lay a track over it and transport a large quantity of materials in readiness for the season's work.

From Mandan to Fryburg, a distance of 136 miles, the work was light, except the construction of the numerous bridges across the Heart River and its tributaries. From Fryburg to Beaver Creek, a distance of 30 miles, the line crossed the Bad Lands, and some difficulties were encountered, arising principally from the distance from the base of supplies and the frequent presence of hostile Indians in the vicinity. From Beaver Creek, down Glendive Creek to the Yellowstone, the route was easy. The chief engineer's affidavit of completion to the Little Missouri, 150 miles, was filed in the General Land Office September 3, 1880, and to a point about nine miles west of Glendive (near Iron Bluff), a further distance of 75 miles, on July 20, 1881, though the track had actually reached that point some time before. The end of the road was now about 700 miles west of Duluth, on Lake Superior, and was complete, except as to the bridge across the Missouri River between Bismarck and Mandan.

The Yellowstone Division extends from Glendive to Billings, 225 miles, the road ascending the Yellowstone by its south bank until within two miles of the latter point, when it crosses to the north bank.

Work began on this division in the spring of 1881, and was pushed with great vigor, reaching Billings by midsummer. The chief engineer's affidavits show the following results as accomplished:

	Miles.
April 17, 1882	100
July 11, 1882	25
July 24, 1882	25
August 10, 1882	25
August 25, 1882	25
October 27, 1882	50
November 9, 1882	25
November 28, 1882	25
November 28, 1882, bridge over the Missouri	4.6
Total	304.6

The last-named item given above comprises the bridge across the Missouri at Bismarck, a work of much difficulty. The site of the bridge was fixed in July, 1880, and ground was broken for its construction in May, 1881, and it was formally opened for use October 21, 1882, though not certified until nearly a month later. The road was now continuous from Duluth westward a thousand miles. The season's work had carried the road well over into the adjoining division, to a point called Livingston, 115 miles west of Billings.

The Montana Division is comprised between Billings and Helena, a distance of 239 miles. The road crosses the Yellowstone at a point 37 miles west of Billings, and recrosses to the north side at Livingston, where it leaves the valley of the Yellowstone and begins the ascent of the Belt Range, rising 1,052 feet, to Bozeman Pass, in a distance of 12 miles, with maximum grades of 116 feet to the mile. It crosses the Pass by a tunnel 3,610 feet long, at an elevation of 5,565 feet above sea-level, or 18 feet higher than the summit of the tunnel through the main chain of the Rocky Mountains at Mullan Pass. The descent westward from Bozeman tunnel is easily made by way of Rock Cañon, with maximum grades of 116 feet for a portion of the distance, and thence proceeding

down the valley of the East Gallatin, crosses the Missouri and reaches Helena.

Work was begun on Bozeman tunnel February 11, 1882, almost simultaneously with the commencement of work on the division at Billings. To avoid delay in track laying west of the Pass, a temporary track 2½ miles in length, with grades of 220 feet, was laid across the divide, and the road carried forward steadily during the winter of 1882–'83, except when interrupted by short periods of extremely cold weather. The track reached Bozeman on the 14th of March, 1883, and the first passenger train arrived there, amid great rejoicing, on the 21st. In June the road was completed to Helena, 1,132 miles west of Duluth, with the exception of Bozeman tunnel, which will probably be completed by the close of the year.

The Rocky Mountain Division extends from Helena to Heron, a distance of 274 miles.

The route via Mullan Pass was adopted in 1881, but was not formally approved by the Department of the Interior until May, 1883. Construction was begun on the division at Mullan tunnel (through the main Rocky Mountain range) December 14, 1881, and is not yet completed, but soon will be. It is 3,850 feet long, and at the highest point 5,547 feet above the level of the sea.

From Helena the line follows the narrow valley of Seven-Mile Creek, and up Greenhorn Gulch to the Pass, with maximum grades of 116 feet, then descends the Little Blackfoot to its junction with the Deer Lodge, then down the Hell Gate to Missoula, and through the Coriacan Defile to the Jocko, down that stream to the Flathead River, and down that to its junction with Clark's fork of the Columbia, which it descends.

As far as the valley of the Little Blackfoot, about 30 miles west of Helena, the road was built from east towards the west, reaching that point on the 22d of August, 1883, and was there joined by the other portion, built eastward from Wallula, on the Columbia, where it is joined by the main line of the Oregon Railway and Navigation Company coming from Portland.

The Pend d'Oreille Division begins at Wallula and ends at Heron, a distance of 269½ miles. It extends in a generally northeastern direction across the great plains of the Columbia, around the north end of lake Pend d'Oreille, and along the Columbia River until it meets the division to the eastward.

A small amount of work was done on the division in 1879, but it was not until the spring of 1880 that operations were pushed with vigor.

During that year the grading was completed to Rathdrum, 189 miles, and track was laid from Wallula to the south bank of Snake River, and from Ainsworth, on the north bank of that stream, 48 miles further, to Twin Wells. At the close of the season the grade was 124 miles in advance of the track. * * * The crossing of Snake River is at present effected by a transfer-boat.

A bridge is in course of construction, and its completion expected in 1884. In length it will be next to that at Bismarck.

The road was easy of construction until it approached Lake Pend d'Oreille, when the country becomes much broken. Much trestle work is used, one stretch being 8,400 feet long, and the aggregate amounting to nearly three miles.

The most difficult portion of the whole line to construct was that between Sand Point, on Lake Pend d 'Oreille, and the crossing of the Flathead, one of the principal obstacles being the density of the forests and the size of the trees. Most of the work through the woods and swamp along the lake shore was done in the winter of 1881–'82. At

times thousands of men "were engaged in shoveling the snow from the line in order that the grading and track-laying might proceed." Some blasting of rocks upon an enormous scale was done, and in the spring occurred land-slides, comparable with the one that formed the Cascades of the Columbia.

By the close of 1881 the road had been completed to Algoma, at the northwest arm of Lake Pend d'Oreille, a distance of 225 miles. During 1882 work proceeded, but was included in the difficult portion referred to, and progress was slower. Still, 100 miles were added to the completed road, and it had reached Thompson's River. When the season of 1883 opened everything was in readiness to push the work forward to completion before its close. On the 27th of April the chief engineer's affidavit of completion to Jocko was filed, and by June the road had reached the summit of the Coriacan Defile, by way of Findlay Creek, with a maximum grade of 116 feet to the mile. The descent to the eastward, through the Coriacan Defile, involved some heavy work and maximum grades of 116 feet, but the approximation of the two ends of the road excited every one to the greatest exertion, and on the 22d of August, 1883, the rails were joined in the valley of the Little Blackfoot. The formal ceremony of the opening of the route took place September 8, 1883.

In order to reach Portland, Oreg., 214 miles from Wallula, use is made of the Columbia River line of the Oregon Railway and Navigation Company, which, like the main line of the Northern Pacific, is entirely in the interest of the Oregon and Transcontinental Company. This road is on the south side of the Columbia, and, except the last 40 miles, lies upon the edge of the river. During its construction some blasting of extraordinary proportions was done, and the whole work was difficult, especially that portion between The Dalles and the Cascades, a distance of about 45 miles. Between Wallula and The Dalles the work was much lighter, and below the Cascades the road leaves the river and finds level ground to Portland.

In order to utilize the navigation of the Columbia above the mouth of the Willamette, a portage railroad, of 6 miles, had early been built on the north bank around the Cascades, and another, of 13 miles, on the south bank from The Dalles to Celilo.

To make the all-rail communication between Wallula and Portland, the work of construction was begun between Wallula and Celilo in 1880, and in the fall of 1881 the grade was completed to the foot of the Cascades, at Bonneville, and in the spring of 1882 the road was operated to that point. The portion between Bonneville and Portland was opened in the following October.

The Oregon Railway and Navigation Company has under construction a branch from Umatilla, 187 miles above Portland, to connect, via the valley of the Grande Ronde and the Powder River Valley, with the Oregon Short-Line branch of the Union Pacific at Snake River.

This line is now in operation to the Blue Mountains, and its completion in 1884 is expected, thus giving a direct route from the Union Pacific at Granger to the Columbia River Valley. The main line continues eastward from Wallula, and by a system of branch lines, connected where practicable with steamboat navigation on the Columbia and Snake Rivers, serves the rich country south of the Snake and between the Bitter Root and Blue Mountains.

The Pacific Division of the Northern Pacific Company extends from Portland to Puget Sound, being linked to the main line as above described. It follows the Willamette from Portland to the Columbia, and

thence, by the south bank of the latter, to a crossing place about two miles above Kalama and 40 miles from Portland, where trains are to be ferried over the river. It is expected that this connection will be made before the close of the present summer.

Next to the Minnesota Division the line from Kalama, on the Columbia, to Tacoma, on Puget Sound, is the oldest portion of the Northern Pacific Road. The joint resolution of Congress of May 31, 1870, made the line down the Columbia and thence to Puget Sound the main line, and that proposed across the Cascades a branch, provided that 25 miles of the road between the Columbia and the Sound should be built within a year from that time, and that the whole road should be opened to the Sound before the close of 1873.

The company began to build from Kalama, on the Columbia, 9 miles above the mouth of the Cowlitz, in April, 1871, and 25 miles were completed that year. During the next year 50 miles were built. Work was resumed in the spring of 1873, but was much embarrassed by financial difficulties, and only reached Puget Sound at Tacoma, 105 miles from Kalama, twenty-four hours before the expiration of the time fixed by Congress.

The road follows the Cowlitz for about 40 miles, then across a divide to a tributary of the Chehallis, and a second divide to the Nisqually, whence it crosses level, gravelly prairies until near the Sound, and then sharply descends to tide-water. The grades are easy for the whole distance except the last 2 miles, where maximum grades of 116 feet to the mile are used. The construction involved no difficult work.

ROUTE NEAR THE FORTY-FIRST AND FORTY-SECOND PARALLELS.

About one-half of this work, extending from the Missouri River to Fort Bridger, was not explored with special reference to the practicability of constructing a railroad. Information furnished by the reports of Colonel Fremont and Captain Stansbury, of the Corps of Topographical Engineers, United States Army, sufficed for the due consideration of this portion.

From Fort Bridger to Fort Reading, on the Sacramento River, the explorations were conducted by Lieut. E. G. Beckwith, Third Artillery.

A route presenting favorable conditions might commence either at Fort Leavenworth, with connection with Saint Louis, or at Council Bluffs, connecting with Rock Island, ascend the Platte River and enter the eastern chain of the Rocky Mountains (the Black Hills) by the North Fork and its tributary, the Sweet Water.

Another route, by the South Fork and its tributary, Lodge Pole Creek, was suggested by Captain Stansbury as shorter and less expensive.

From the Missouri River to the entrance to the Black Hills, 30 miles above Fort Laramie, 520 miles from Council Bluffs and 755 miles from Fort Leavenworth, the route presented no difficulties whatever. West of this it crossed many lateral streams, with deep ravines, and left the Platte just below Hot Springs Gap. To avoid these, it crossed a range of hills 800 feet above the river and descended to the Sweet Water, followed that stream to its source, where it attained the summit of the South Pass plateau at an elevation of 7,400 feet.

From the South Pass the route followed down Sandy Creek, a tributary of Green River, to the crossing of the latter, and thence to Fort Bridger. It then descended the divide between the waters of Green River and those of Great Salt Lake by the valley of Black's Fork or

one of its tributaries. The summit was found on a broad terrace at the foot of the Uintah Mountains, the elevation being 8,373 feet. From this point the line descended over the undulating country separating the Uintah and Bear River Mountains, crossed the head of Bear River, and, entering the valley of White Clay Creek at its head, followed down that stream to its junction with Weber River.

The Wasatch Mountains intervene between this plateau country and Great Salt Lake, and it was found that the passage through them could be effected either by following Weber River or by ascending to near the sources of the Timpanogas and descending that stream, both being directly or indirectly affluents of and equidistant from a common point on Great Salt Lake.

The valley of Great Salt Lake once entered, no obstacle was found to the construction of a railway passing by the south end of the lake to its west side.

From the western shore of Great Salt Lake to the valley of Humboldt River the country consists alternately of mountains, in more or less isolated ridges, and of open level plains, rising gradually from the level of the lake on the east to the base of the Humboldt Mountains on the west; that is, from 4,200 feet to 6,000 feet above the sea. West of the Humboldt Mountains the country is of the same character, the plains declining until at the west shore of Mud Lake, usually called the foot of the Sierra Nevada, the elevation is 4,100 feet.

The mountains in this space of 500 miles (600 miles by the route traveled) between Great Salt Lake and the foot of the Sierra Nevada have a general north and south course. Occasionally cross-spurs close in the valleys to the north and south, but more frequently this isolation is only apparent. The mountains are sharp, rocky, and inaccessible in many parts, but are low and easily passed in others. Their general elevation varies from 1,500 to 3,000 feet above the valleys.

The valleys rarely have a width east and west of more than five to ten miles, but often are of great extent north and south. They are irregular in form, frequently extending around the ends of mountains or united to succeeding valleys by level passages. It was found that a railroad might be carried over this series of valleys and around the mountain masses, at nearly the general level of the valleys.

In this manner the route reached the foot of the Humboldt Mountains and then crossed them by a pass nine miles long, about three of which are occupied by a narrow, rocky ravine. The descent was then made to the open valley of Humboldt River, which was followed for about 190 miles, then crossed two ranges of the general character of the Basin Mountains, and reached the foot of the Madelin Pass of the Sierra Nevada, on the west shore of Mud Lake, in a distance of 119 miles, and at an elevation of 4,079 feet above the sea.

In this latitude the Sierra Nevada was the eastern boundary of the Sierra Nevada plateau. Thus far the pass was of a favorable character, the length of the ascent being 22.89 miles, the difference of elevation 1,172 feet, and the altitude of the summit 5,667 feet. Having gained the plateau, it was crossed by a nearly level line to the western boundary, the summit elevation of which was 5,736 feet, and the descent to the Sacramento was made in 15 miles, with a difference of elevation of 1,300 feet. Either a tunnel or an enormous cut with heavy grade would be required at the summit.

The route then followed the valley of the Sacramento, encountering many obstacles, to a point 17 miles above Fort Reading, where the open

valley was attained, and no further difficulty existed to the construction of a railroad to the Bay of San Francisco.

By the route indicated the distance from Fort Leavenworth to Fort Bridger was 1,072 miles; from Fort Bridger to Fort Reading, 1,012 miles; from Fort Reading to Benicia, 180 miles; and from Leavenworth to Benicia, 2,264 miles.

The distance from Council Bluffs to Benicia was 2,134 miles.

By a different location 103 miles could be saved in the Great Basin, and the total distance reduced to 2,031 miles.

The coal-beds of Green River were noticed.

The winter climate along the greater portion of the route was known to be severe, but Lieutenant Beckwith did not apprehend any unusual difficulty from this cause.

The features of this route, favorable to the economical construction of a railroad, are apparent from the description given in the detailed reports.

The unfavorable features were described, as the costly construction, for nearly 300 miles along the Platte and Sweet Water, in ascending to the summit of the South Pass; in the Cañon of the Timpanogas; in the two cañons of the Sacramento, 14 and 9 miles in length, and in the sinuous course of this river for a space of 96 miles, through heavily timbered mountains rising precipitously from the stream.

The sum of the ascents and descents was the next least after that of the forty-seventh to the forty-ninth parallel.

The cost of 2,031 miles of road, from Council Bluffs to Benicia, was estimated at $116,095,000.

The survey of the western portion of this route by Lieutenant Beckwith resulted in the discovery of a more direct and easier route than was believed to exist from the Great Salt Lake to the valley of the Sacramento. Subsequently, Brevet Lieutenant-Colonel Steptoe, commanding the troops in Utah, reported the discovery of a still more direct route from Great Salt Lake to San Francisco, passing to the south of Humboldt or Mary's River, and thence to the valley of Carson River.

It crossed the Sierra Nevada by the passes at the head of Carson River, and descended to the valley of the Sacramento. He stated that this route was, throughout, practicable for wagons.

THIS ROUTE AS ACTUALLY OCCUPIED.

Practically this route begins at Omaha, Nebr., opposite Council Bluffs, on the Missouri River. The former town was not in existence when the explorations were made; consequently it is only the latter which is mentioned in instructions and reports. It follows the explored line to the mouth of the Lodge Pole, when it ascends that stream, as suggested by Captain Stansbury, and keeping very close to the line as laid down on the map of the explorations, reaches the valley of Salt Lake. Instead of passing around the south end of this lake, however, it passes around it by the north, and being then some 85 miles apart, the constructed gradually approaches the explored line for 250 miles, when they unite near Halleck Station. They now coincide for 200 miles and then diverge again, the explored line reaching Sacramento by way of the Madelin Pass and Pitt River, whilst the constructed line attains the same point by a much more direct line through Donner Pass, saving 184 miles of distance. From Sacramento to the Bay of San Francisco the lines are coincident.

All things considered, the close agreement of the two lines is worthy

of remark, especially in view of the fact that the eastern half of the route was not explored with special reference to the construction of a railroad.

THE UNION AND CENTRAL PACIFIC RAILROADS.

These roads were built by two distinct organizations, now known as the Union Pacific Railway to Ogden, Utah, and the Central Pacific Railroad thence to San Francisco. The latter, having been first put under construction, will be first spoken of.

CENTRAL PACIFIC RAILROAD.

With information gained largely through Government explorations and surveys, Mr. T. D. Judah, an educated and accomplished engineer, early devoted himself to the advancement of the railway interests of California. In April, 1854, he began a survey for the location of the Sacramento Valley Railroad, and submitted his reports and estimates on the 30th of May following. The section of the road between Sacramento and Folsom, 22 miles, was completed in two years. It was the first railroad on the Pacific coast, and now forms part of the Central Pacific Railroad system, although not on the transcontinental line. After the results of the Pacific Railway explorations became known, he published, on the 1st of January, 1857, a pamphlet of much value entitled "A practical plan for building the Pacific Railroad," which included a plan for sleeping and restaurant cars. This was two and a half years before the discovery of the Washoe silver mines, which event greatly increased the necessity for a railroad eastward from the Pacific coast. He took a prominent part in the Pacific Railroad Convention which assembled at San Francisco in September, 1859, and was accredited by that body to represent at Washington the ideas of the people of the Pacific coast upon the railway project. His report concerning his mission was published in 1860. Late in that year he explored the mountain passes through the Sierra Nevada with a view to finding, if possible, a better and more direct line than that surveyed by Lieutenant Beckwith by way of Madelin Pass, and the result was the discovery of the present route, which saves a distance of 184 miles and the corresponding cost.

Steps were now taken to organize a company under the general railroad law of the State of California, but the organization was not completed until June, 1861, when it took the name of the Central Pacific Railroad Company, with Mr. Judah as chief engineer. In 1859 he had been associated with others in running a line from Sacramento to Roseville for the American River Railroad Company. This survey was afterwards used for a part of the Central Pacific line.

By a resolution of the board of directors of 9th of October, 1861, Mr. Judah was sent to Washington as the agent of the Central Pacific Railroad Company, to procure aid from the Government to construct the road. He was accompanied on the way by the Hon. A. A. Sargent, a Member of Congress from California, a young, ambitious, and indefatigable man, who, upon his arrival at the seat of Government, was assigned by the Speaker of the House to the Special Pacific Railroad Committee, when he devoted his time and energy almost exclusively to the subject. He introduced the bill granting aid in lands and bonds, taking the ground that the road was a military necessity, illustrating his argument by the existing circumstances of the country, then in-

volved in war. The danger of delay, the necessities of the postal service, the control of the Asiatic commerce, were all duly and forcibly set forth. The measure passed through all the requisite stages, the debate in the House extending from April 8, 1862, until it was closed by the passage of the bill on the 6th of May following. After several unsuccessful efforts to call it up, the bill came before the Senate on the 11th of June, and, after amendment, was passed on the 20th by the decisive vote of 35 to 5. The amendments of the Senate were concurred in by the House, and on the 1st of July, 1862, the act was signed by President Lincoln, and became the law of the land.

The act related primarily to the Union Pacific Railroad, and was entitled "An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes." It included, however, the Leavenworth, Pawnee, and Western Railroad of Kansas, the Central Pacific Railroad of California, the Hannibal and Saint Joseph Railroad, and the Pacific Railroad Company of Missouri; thus recognizing existing companies at either end of the route.

The act granted bond subsidies of these clauses, $16,000 per mile over the plains sections, $48,000 per mile over the mountain sections, and $32,000 per mile over the intermediate portion, between the western base of the Rocky Mountains and the eastern base of the Sierra Nevadas. These bonds were a first lien upon the roads and their fixtures, and eventually repayable. The grant of lands was for five alternate sections on each side of the railroad (these being designated by the odd numbers) within the limit of ten miles on each side of the road. By the act approved July 2, 1864, these numbers were doubled, and the companies were authorized to issue mortgage bonds to an amount equal to those issued by the Government, and they were given priority. Additional acts modifying the original law have been passed from time to time, but it is not deemed necessary to specify these changes here.

The act required each company named therein, to file their acceptance of its conditions, within six months after its passage. It required the Central Pacific Company to complete 50 miles of its road, within two years after filing such acceptance, and 50 miles per year thereafter, and authorized it to build eastward until it met the railroad coming from that direction.

By a communication dated November 1, 1862, the Central Pacific Railroad Company of California accepted the conditions, the receipt of this acceptance being acknowledged by the Secretary of the Interior under date of December 24, 1862.

The final working surveys of the first division of 50 miles were completed during the autumn of 1862, and the work of grading was begun with a good deal of ceremony in January, 1863, Governor Leland Stanford, president of the company, turning the first spadeful of earth.

On the 12th of January, 1864, President Lincoln officially established "the point where the line of the Central Pacific Railroad crosses Arcade Creek, in the Sacramento Valley, * * * as the western base of the Sierra Nevada Mountains." The object of this was to determine the beginning of the Sierra Mountain section, to govern the issue of the Government bonds.

By June, 1864, 31 miles of track had been laid, but because of adverse circumstances it was not until September, 1866, that the road was completed to Alta, 70 miles east of Sacramento, and 5,625 feet above

the level of the sea. In November the tract reached Cisco, 22 miles farther, at an elevation of 5,911 feet, the last 2,286 feet having been overcome in a distance of 23 miles. It was still 13 miles to the summit of the Sierra, and to pass it a tunnel was necessary. However, the hardest part of the work on this section was already done. The deep snow of the winter now put a stop to further operations and nothing was done upon the work of grading until the following spring. It was then resumed, with thousands of laborers to push it along. By midsummer of 1867, the road was completed to the summit, and the force was at work on the tunnel there, and down the eastern slope. On the 30th of November, 1867, the first passenger train reached the summit, and in December the road had crossed it, at an elevation of 7,042 feet, and had reached the Lower Truckee, nearly 140 miles east of Sacramento.

In going 105 miles east of Sacramento the road overcame an elevation of 6,986 feet, or an average of 69½ feet to the mile, while much of the mountain grade was from 90 to 100 feet. Between Colfax and Cisco, a distance of 38 miles, it was necessary to rise 3,463 feet, or an average grade of 91 feet, while for short distances it was from 105 to 116 feet, the latter being the legal maximum.

The work was again delayed by the storms of winter. Both the Central and Union Companies were now about equidistant from the head of Salt Lake, and as the season of 1868 opened the race between the two for that point, which had really been going on for a twelvemonth, was pushed with the utmost vigor, with a resulting speed in railroad building such as was before unknown. Literally an army of workmen were employed (25,000 men and 6,000 teams), and the 1,100 miles of route between the Sierra and Rocky Mountains presented a busy scene. The woods rang with the strokes of the ax and the quarries with the click of steel. The streams were bordered with lumbermens' camps and choked with floating logs, and materials, supplies, and equipment for the Central Pacific were scattered from New York, via Cape Horn and San Francisco, to the very end of the track advancing eastward. Track was laid at the rate of 2 to 6 miles a day by each company, and on one day even 7 miles by the Central Pacific. It is a fact that on some days a greater distance was laid than the ox teams of 1849 averaged for a day's journey.

By September 30, 1868, the Central Pacific track extended 350 miles eastward, and the graders were 50 miles ahead, and another grading party, starting at the head of Salt Lake, were coming westward 100 miles

As the two roads approached each other the competition between them increased, and the whole country watched the race with the greatest interest. Surely no other of equal importance or grander in its results was ever run on the face of the earth.

The winter of 1868–'69 operated to delay work on the Union Pacific, but the Central Pacific, being now in the Great Basin, was interrupted but one week. It had no difficulty with snow, except in the Sierras, where but 22 miles of the 40 or 50 of snow belt had been protected by snow-sheds. It was found necessary before another winter set in to protect the whole of this distance.

During the progress of the construction some controversy arose between the two companies in interest in regard to the point where they should join. It was finally agreed that the junction should be made at a point 5 miles west of the town of Ogden, Utah, the Central Company

leasing from the Union this length of track so that the junction should practically be at that town.

The tracks of the two roads were finally made continuous by the driving of the last spike; an engineer from the west met one from the east, and on the 10th of May, 1869, the entire route was thrown open to traffic, more than seven years ahead of the time fixed in the law.

The following statement will show the number of miles of road constructed annually by the Central Pacific Railroad Company on this line:

To 1866	56
In 1866	38
In 1867	44
In 1868	362
In 1869	243
Total	743

These distances do not correspond with those given by the Commissioner of Railroads, because the latter states them for fiscal years while the foregoing table is for calendar years, and for the additional reason that the statement of the Commissioner is made up from the dates of the affidavits of the chief engineer, and these are necessarily subsequent to the completion of the sections to which they refer.

THE UNION PACIFIC RAILROAD.

This road was provided for in the same law (July 1, 1862) that authorized the construction of the Central Pacific, and is the one which appears prominently in the act.

While the energy of the West was still engaged in penetrating the secrets of the Sierra, a movement meaning work began to develop in the East. In general terms there were two separate railway systems from east to west, one concentrating at Chicago, the other at Saint Louis. The capitalists of both these cities were alive to the vast possibilities of the Pacific trade, and desired to secure it for their respective localities. With this view Chicago had projected three lines across the State of Iowa, converging at Council Bluffs, and they all had a corporate existence and formed a nucleus for a distinct movement for the construction of a railway to the Pacific.

On the other hand Saint Louis, aided by the State of Missouri, had, as early as 1851, begun the construction of the Missouri Pacific Railway, the terminus of which was fixed at Kansas City. Four years later the Territorial government of Kansas incorporated the Leavenworth, Pawnee and Western Railroad, with authority to build from Leavenworth to Fort Riley, and thence westerly. It was apparent that the two companies might connect and thus form a rival grand trunk Pacific road.

For some years these enterprises remained in abeyance; but in 1860–'61 the discovery of gold and silver in Colorado and Nevada gave a great impulse to the carrying trade of the plains, and the prospect of profit aroused capitalists. Rumors of the new line over the Sierra also found their way east; and the legislature of the new State of Kansas passed a joint resolution in March, 1862, urging on Congress the creation of a National Pacific Railroad Company, and the representatives of all the interests concerned appeared at Washington. The result was the law of July 1, 1862. The rival interests of Chicago and Saint Louis appear in the fact that the law does not fix any special eastern terminus, but locates the initial point on the one hundredth meridian, at some

equidistant station to be designated by the President of the United States. As the more southerly line was already possessed of an organization, the charter modified this advantage by incorporating the northerly line under the name of the Union Pacific Company, and gave it a marked predominance in the act. Government aid was given in equal degree, however, to the road which was to cross the mountains from Sacramento, and to both the eastern lines, but required the eastern roads to each build 100 miles within two years after their acceptance of the conditions of the law.

The commissioners of the Union Pacific Railroad and Telegraph Company, named in the act of July 1, 1862, met in Chicago on the 2d of September, 1862, and organized by electing William B. Ogden president, Thomas W. Olcott treasurer, and Henry V. Poor secretary, and by resolution instructed the officers of the company to accept the act of incorporation in behalf of the company. Under date of June 23, 1863, the Secretary of the Interior was duly notified of this acceptance, and the receipt of this notification was acknowledged by him on the 27th. The act of July 2d, 1864, modified some of the provisions of the previous one. Its provisions were accepted by the company under date of October 7, 1864.

The Leavenworth, Pawnee and Western Railroad Company (southerly route), under date of November 15, 1862, accepted the provisions of the act of July 1, 1862, the notification of acceptance being acknowledged by the Secretary of the Interior on the 23d of December, 1862. As early as 30th September, 1862, the company had contracted for an immediate and rapid construction of their line.

On the 17th of June, 1863, this company notified the Interior Department that, under the laws of the State of Kansas, it had changed its corporate name to the "Union Pacific Railway, Eastern Division," and that it was their intention to construct the line from the one hundredth meridian to the western boundary of the State of Nevada.

On the 6th of July the Secretary of the Interior acknowledged receipt of this communication, but declined to decide at that time whether the company had the power claimed. The conditions of the act of July 2, 1864, were accepted on the 5th September, 1864, and the acceptance was acknowledged by the Interior Department on the 9th.

On the 7th of March, 1864, President Lincoln, in accordance with the requirements of the act of July 1, 1862, fixed a point on the western boundary of the State of Iowa, "east of and opposite to the east line of section 10, in township 15 north, of range 13 east, of the sixth principal meridan, in the Territory of Nebraska," from whence the Union Pacific Railroad Company was authorized to construct a line to connect with some point on the one hundredth meridian. The terminal point as thus fixed was at Omaha.

During the season of 1864 five engineering parties were engaged for several months in preliminary surveys of the several passes through the mountain ranges between the valley of the South Platte and Salt Lake, and the contract for the construction of the road to the one hundredth meridian was signed in August.

On the 3d November, 1864, the company submitted a map of the route of the Union Pacific for the first 100 miles west of Omaha, and the location was approved by the President of the United States on the following day.

By the 29th of November the grading was in progress on 40 miles of the line. The inaugural ceremony took place on the 2d of December.

Meanwhile the organization for building the southerly line obtained

from Congress the privilege of making their own road the grand trunk route connecting with the Central Pacific in case they should anticipate the Union Pacific in reaching the one hundredth meridian. The same act also granted an extension of a year for the time of completion of the first 100 mile division of each road.

Whilst all this was going on the location of the road from Omaha westward for 23 miles was found to be unsatisfactory, and the company, on May 12, 1865, requested authority to change it, increasing the distance about 8 miles but reducing the grades from 80 feet to 30. This gave rise to much correspondence and investigation, with considerable delay, but on the 23d September, 1865, President Johnson authorized the abandonment of the former line and the adoption of a new one.

By the 19th of October, 1865, 16 miles of track had been laid from the Missouri River, and arrangements had been made for going on with the work at the rate of one half mile per day.

The southerly line had completed 40 miles of its road by the 25th of April, 1865. During the summer of 1863 a contest for the possession of the road and its franchises had arisen, the result of which was to annul the contract of September, 1862, and to transfer the ownership of the road. The litigation growing out of this movement had greatly delayed operations.

Whilst the controversy concerning the location of the first section of the Union Pacific was going on but little progress was made, and after the settlement of that question it was too late to do much in the field. Consequently the contractors addressed themselves with great energy to the task of accumulating laborers and materials for a vigorous prosecution of the work on the opening of the next season. The eastern connections with Omaha by rail had not yet been made, and the difficulty and expense of this were simply enormous. When the spring of 1866 opened, all was in readiness and only awaited the signal to assume the most tremendous activity.

About the middle of April the word was given and the Platte Valley at once became a busy region. Mile by mile and day by day the work progressed. By the middle of May 80 miles of road had been completed; by August 19 the road had reached a point on the Platte opposite Fort Kearney, 194 miles west of Omaha; and when the year closed 305 miles of the road were completed, 265 miles having been built in the twelve months, 65 miles of it in one month, and 3 miles in one day.

In December, 1866, connection was made between Omaha and Chicago by the completion of the Northwestern Railroad, thus greatly lessening the difficulty of bringing forward materials and supplies.

Upon the opening of the season of 1867 the previous season's activity was renewed, and in October the road reached well into the Black Hills. When the end of the year came the end of the road was 550 miles west of Omaha, and the season's work had netted 245 miles of completed road. In 1868 the length of the road operated increased 350 miles, and with the completion of 134 miles in 1869 junction was made with the Central Pacific, as before stated, on the 10th of May of that year.

Meanwhile the construction of the southern line was continued, but its chance of becoming the main line of the trunk route was lost by its failure to reach the one hundredth meridian in advance of the Union Pacific, and it was therefore headed towards Denver, which was rapidly growing into importance. It had a continued fight with the Indians occupying the Smoky Hill River country, who exhibited the strongest opposition to the building of a railroad along that stream.

By act of Congress of May 31, 1868, the name of the company was again changed, and it became "The Kansas Pacific." The road was completed to Denver, 639 miles from Kansas City, on the 1st of September, 1870.

The Denver Pacific Railroad, connecting the Kansas Pacific with the Union Pacific at Cheyenne, a distance of 106 miles, was constructed by the Kansas Pacific Company under a charter dated November 19, 1867, and was opened January 1, 1871, and on the 24th of January it, together with its parent company, was consolidated with the Union Pacific Railroad Company, the resulting organization being thereafter known as the Union Pacific Railway Company.

ROUTE NEAR THE THIRTY-EIGHTH AND THIRTY-NINTH PARALLELS.

The general consideration which determined the position of this route was its central position geographically, it being about midway between Canada on the north and Mexico on the south, and connecting Saint Louis and San Francisco, which are respectively on latitude 39° and 38° nearly. Moreover, it seems probable that it would prove the shortest road from the bay of San Francisco to the navigable waters of the Mississippi.

The exploration was conducted by Capt. J. W. Gunnison, Corps of Topographical Engineers, United States Army. It commenced at the mouth of the Kansas River (present Kansas City) and followed that river and its branch, called the Smoky Hill Fork, to a convenient point for crossing to the Arkansas, the valley of which it entered just west of the Great Bend, near the ninety-ninth meridian. It ascended the Arkansas to the mouth of Apishpa Creek, 50 miles above Bent's Fort, then crossed to the entrance of the Rocky Mountains (here called the Sierra Blanka) at the Huerfano Butte, 654 miles from the starting point, and at an elevation of 6,099 feet.

Of the several passes through the Rocky Mountains, connecting the tributaries of the Huerfano with those of the Rio del Norte, only the Sangre de Cristo was reported practicable for a railroad. By side location the summit, 9,219 feet above the sea, was attained at 692 miles from the mouth of the Kansas, and the descent was made to the valley of the Rio Grande, with practicable, though heavy grades. The line thence to the vicinity of Fort Massachusetts was more favorable.

The route then, with easy grades, ascended the valley of the San Luis to Sahwatch (or Saguache) Creek, one of whose affluents rises in a pass of the Rocky (here called the Sahwatch) Mountains, known as the Cochetopa Pass, the elevation of which was 10,032 feet; 816 miles from the starting point.

To cross the summit, a grade of 124 feet to the mile, for several miles, and a tunnel nearly 2 miles long would be required.

The descent from Cochetopa Pass, with grades varying from 41 feet to 108 feet to the mile, was by way of Pass Creek to its junction with Cochetopa Creek, and thence to the valley of Grand River, which it followed for 173 miles, and then crossed the divide to Green River, a distance of 68 miles, and approached the pass through the Wahsatch Mountains by the tributaries of Green River. Here a tunnel three-quarters of a mile long would be required, with eastern grades of approach of 125 feet to the mile for 6½ miles, and a descent to the westward of 131 feet to the mile for 5 miles. Thence westward for 18 miles the route, with heavy grades, pursued the valley of Salt Creek, and then entered the valley of

the Sevier, and 86 miles further on the exploration terminated, at a distance of 1,348 miles from its beginning.

From the mouth of the Kansas to the Sangre de Cristo Pass the route presented no peculiar difficulties nor advantages, but quite was similar to the two more northerly ones.

The Sangre de Cristo and Cochetopa Passes were deemed practicable, but at great cost.

Upon the whole the route was considered impracticable because of the engineering difficulties and the cost of construction involved in overcoming them. (It may not be amiss to remark here that a railroad has been built and the cars are now running over this very route.)

Aside from the difficult nature of this route the following considerations were urged in regard to the cost of operating a railroad in case one were constructed. From the mouth of the Kansas River to the west base of the Un-kuk-oo-ap Mountains is 1,523 miles; the sum of ascents, 23,190 feet; of descents, 19,052 feet; length of equivalent horizontal line for the route, 2,123 miles.

Of the direct route from the western base of the Un-kuk-oo-ap Mountains to the entrance to the Tay-ee-chay-pah (Tehachapi) Pass there was no survey nor positive information. It was believed to be, for the most part, a desert similar to other portions of the Great Basin. Supposing this part of the route to be a straight line, with uniform descent to the entrance of the Tay-ee-chay-pah Pass (no practicable pass was known to the north of it), the distance would be 430 miles and the descent 1,830 feet; the equated horizontal distance, 464 miles.

From the entrance of the Tay-ee-chay-pah Pass to San Francisco was 326 miles; sum of ascents, 1,308 feet; sum of descents, 4,608 feet; equated length, 410 miles.

Adding all these together, the sum, 3,027 miles, represented the equated distance from the mouth of the Kansas to San Francisco, the length of a straight, horizontal line between the terminal points being only 1,500 miles.

The distance from Sevier River to Great Salt Lake was 120 miles; sum of ascents and descents, 1,600 feet; equated distance, 150 miles; thence to Benecia, by the route near the forty first parallel, explored by Lieutenant Beckwith, 872 miles; sum of ascents and descents, 15,200 feet; making the equivalent horizontal line 1,160 miles; which, added to the equated distance from the mouth of the Kansas to Sevier River, 2,050 miles, gave a total of 3,360 miles as the equated distance between the terminal points.

When Captain Gunnison reached Sevier River he was killed by Indians, and the charge of the exploration devolved upon Lieut. E. G. Beckwith, who made an examination from the Great Salt Lake, to connect that position with the line of the forty-first parallel; then returned to Salt Lake and continued the survey westward to the waters of the Pacific, as related in the account of the route near the forty-first and forty-second parallels.

ROUTE NEAR THE THIRTY-EIGHTH AND THIRTY-NINTH PARALLELS AS ACTUALLY OCCUPIED.

Practically, all of the explored portion of this route has been occupied from Kansas City to Pueblo, 635 miles, by the Atchison, Topeka and Santa Fé Railroad, and from Pueblo to Great Salt Lake, at Salt Lake City, by the Denver and Rio Grande Railway, although certain portions have been more exactly occupied by other lines. For instance, the

Kansas Pacific is coincident with the explored line from Kansas City to Ellsworth, a distance of 223 miles, but nowhere very distant from the Atchison, Topeka and Santa Fé Railroad. At Ellsworth, the explored line leaves the valley of the Smoky Hill, and in a distance of about 40 miles crosses to the valley of the Arkansas, at the Great Bend, a little east of the 99th Meridian, when the Atchison, Topeka and Santa Fé road becomes coincident with and follows it for 310 miles to the mouth of Apishpa Creek, a short distance west of Bent's Fort. At Apishpa Creek the routes diverge again, the constructed line reaching the valley of Cochetopa Creek by a direct route through Pueblo, the Cañon of the Arkansas, and Tomachi Creek, whilst the explored line attained the same point via the Sangre de Cristo Pass. (The Denver and Rio Grande has built through this pass in order to reach the valley of the Rio Grande, but not in connection with the through line.) The constructed and explored lines now coincide again for about 350 miles, but instead of passing to the southward of Great Salt Lake, the line, as built, passes to the eastward of it, and at Salt Lake City makes connection for Ogden, on the Union Pacific, and becomes lost in the forty-first and forty-second parallel route.

A comparison of this statement with the brief of the description of the explored route will show how closely the constructed line has followed it, until Salt Lake Valley is reached. It is not probable that the line westward from that point will ever be built.

ATCHISON, TOPEKA AND SANTA FÉ RAILROAD.

The Atchison, Topeka and Santa Fé Railroad Company was originally incorporated under the name of the Atchison and Topeka Railroad Company, by an act of the legislative assembly of the Territory of Kansas, approved February 11, 1859, and the name was subsequently changed in accordance with the Territorial laws, by a vote of the stockholders, November 24, 1863, to the Atchison, Topeka and Santa Fé Railroad Company.

By the second section of the Territorial act the company was—

> Authorized and empowered to survey, locate, construct, complete, alter, maintain, and operate a railroad, with one or more tracks, from or near Atchison, on the Missouri River, in Kansas Territory, to the town of Topeka in said Territory, and to such point on the southern or western boundary of said Territory, in the direction of Santa Fé, New Mexico, as may be most convenient, suitable for the construction of said road, and also to construct a branch of said railroad to any point on the southern boundary of said Territory of Kansas, in the direction of the Gulf of Mexico.

By an act of Congress, approved March 3, 1863, certain lands were granted to the State of Kansas for the purpose of aiding in the construction of railroads in that State. The following is so much of that act as relates specially to this road, viz:

> Second, of a railroad from the city of Atchison via Topeka, the capital of said State, to the western line of the State, in the direction of Fort Union and Santa Fé, New Mexico, with a branch from where this last-named road crosses the Neosho Valley to the point where the said first-named road enters the Neosho Valley; every alternate section of land designated by odd numbers, for ten sections in width on each side of said road and each of its branches.

This grant was conditioned upon the completion of the road within ten years of the date of the act.

By an act of the legislature of Kansas, approved February 9, 1864, the State of Kansas accepted the grants made by Congress and granted to the Atchison, Topeka and Santa Fé Railroad Company such of the lands granted by Congress to the State as were applicable to that road.

By September, 1869, the road was in operation from Topeka to Burlingame, 26 miles. By July, 1870, it had been extended 35 miles to Emporia and in July, 1871, it began operating to Newton, 74 miles further, when building was stopped for a time. On the 9th September, 1872, it was opened to Dodge City, 168 miles beyond Newton and 303 from Topeka. During the month of April, 1872, the road had been opened from Atchison to Topeka, a distance of 50 miles, so that there was now a continuous line for 353 miles from that point on the Missouri River to Dodge City on the Arkansas. On the 1st of January, 1873, the road was opened to the boundary line between Kansas and Colorado, about 470 miles from Atchison. Under the spur of the near approach of the time when the land grant would expire, the company had built 285 miles of road in nine months, or over a mile a day.

On July 10, 1873, the road began operating to Grenada, 481 miles from Atchison, and 18 miles from the State line at Coolidge.

This company makes its through line from Kansas City, by means of the Kansas City, Topeka and Weston Railroad, which is now owned by it, and runs from Kansas City to Topeka, and by the Pueblo and Arkansas Valley Railroad westward from the State line to Pueblo, and southwesterly to the boundary of New Mexico. This southwesterly extension has no connection with this route, and is therefore not considered here. (See thirty-fifth and thirty-second parallel routes.)

The road was opened from Kansas City to Topeka, 66½ miles, on the 29th of August, 1875, and the western extension was opened from Grenada to West Las Animas, 55 miles, on September 17, 1875, and to Pueblo, 83 miles further, on the 4th of March, 1876.

At Pueblo the route under consideration is taken up by the Denver and Salt Lake line of the Denver and Rio Grande Railway. The gauge of this route is only 3 feet, while that of the Atchison, Topeka and Santa Fé is the standard gauge of 4 feet 8½ inches. The result is a break at Pueblo, and a consequent transfer of freight and passengers is rendered necessary.

The Denver and Rio Grande Railway Company was incorporated October 27, 1870, under the incorporation laws of the Territory of Colorado. By act of Congress approved June 8, 1872, right of way was granted "over the public domain, 100 feet in width on each side of the track, together with such public lands adjacent thereto as may be needed for depots, shops, and other buildings for railroad purposes, and for yard room and side tracks, not exceeding twenty acres at any station, and not more than one station in every 10 miles," and the incorporation under Territorial laws was ratified and confirmed. The company was required to complete its line to a point on the Rio Grande, as far south as Santa Fé within five years after the passage of the act, and to complete 50 miles additional south of that point each year thereafter, the penalty for non-compliance being a forfeiture of all rights and privileges granted by the act, so far as concerned the unfinished portion of the road.

Omitting all reference to such parts of the line as do not form a part of the thirty-eighth and thirty-ninth parallel route, the following is an approximate statement of the progress of the construction.

The road was extended from Pueblo, up the Arkansas Valley, to Cañon coal-fields, 36 miles, in 1872, and in 1874 to Cañon City, 8 miles. It was subsequently opened to Salida and Poncha, 60 miles, and in 1881 to Gunnison City, 69 miles farther, or 170 miles from Pueblo. During 1882 the construction westward to the Utah boundary, 171 miles, was completed, and the force building eastward from Salt Lake City had

reached a point 150 miles from that place. The ends of the track were joined in 1883, and connection made with the Union Pacific at Ogden.

ROUTE NEAR THE THIRTY-FIFTH PARALLEL.

The general features which determined the position of this route were the extension west and east of the interlocking tributaries of the Mississippi, the Rio Grande, and the Colorado of the West. Its exploration was conducted by Lieut. A. W. Whipple, of the Corps of Topographical Engineers, United States Army.

Commencing at Fort Smith, about 270 miles from the Mississippi at Memphis, the route, as far as the Antelope Hills on the Canadian, a distance of 400 miles, was found practicable, either by the valleys of the Arkansas and Canadian or over a line south of the Canadian; this latter route branching again, and following either the valley of the Washita or the dividing ridge between it and the Canadian.

From the Antelope Hills the route continued for 250 miles along the right bank of the Canadian, to the mouth of Tucumcari Creek; ascended by the valley of this stream, or by that of Pajarito Creek, attaining the dividing ridge between the Canadian and the Pecos Rivers, at an elevation of about 5,543 feet, and entered the valley of the latter. It followed this valley until, by means of a tributary, it rose to the high land lying east of the Rocky Mountains at an elevation of about 7,000 feet; crossed the elevated Salinas basin, 30 miles wide, the lowest point being 6,741 feet, and gained the divide in the Rocky Mountains at an elevation of about 7,000 feet; from there it either descended through the San Pedro Pass to Albuquerque or Isleta on the Rio Grande, or to the Rio Grande by the valley of the Galisteo River, north of Sandia Mountain. A third route was indicated along the valley of the Pecos to its headwaters; thence to an affluent of the Galisteo, and thence, as before, to the Rio Grande.

The elevation of Isleta was stated to be 4,945 feet above the sea, and its distance from Fort Smith 854 miles.

Crossing the ridge separating the Rio Grande from the Puerco, the route followed the valley of the San José, to one of its sources in a pass of the Sierra Madre, known as the Camino de Obispo; passing the summit at an elevation of 8,250 feet, where a tunnel three-quarters of a mile long at an elevation of 8,000 feet would be required; then descending to the Zuñi River near the Pueblo of Zuñi; and then, over undulating ground to Navajo Spring, on the Puerco of the West.

Another route was examined across the Sierra Madre, about 20 miles north, which was thought to be more favorable. The elevation of the summit was about 7,750 feet. The Puerco of the West heads in this pass, and the route followed the valley of this stream to Navajo Spring, where it joined the other line, and thence down the valley to the junction of the Puerco with the Colorado Chiquito; then down the valley of the latter to the foot of the southeastern slopes of the San Francisco Mountains, elevation 4,775 feet; distance from Fort Smith, 1,182 miles. Here it ascended to the dividing ridge between the waters of the Gila and the Colorado of the West, and continued upon or near it for about 200 miles, to Aztec Pass, elevation 6,281 feet; distance from Fort Smith, 1,350 miles. The highest point reached on this undulating ridge was 7,742 feet, at Leroux's Spring, at the foot of the San Francisco Mountain. From Aztec Pass the descent to the Colorado was made by a circuitous route along the valleys of its tributaries, the largest and last being Bill Williams Fork, the junction of which with the Colorado was

stated to be 1,552 miles from Fort Smith, and at an elevation of about 208 feet above the sea.

The route then ascended the Colorado, about 34 miles, to the Needles, where it left the river by the va ley of a stream (dry at the time) whose source was in an elevated ridge. The summit was attained at an elevation of 5,262 feet, and the route then descended, with an average grade of 100 feet to the mile, for 41 miles to Soda Lake, at an elevation of 1,117 feet. From Soda Lake the ascent to the summit of Cajon Pass, in the Sierra Nevada, elevation 4,179 feet, was made by following the Mojave River. The summit of this pass, following the line, was found to be 1,798 miles from Fort Smith and 242 miles from the point of crossing the Colorado. Here a tunnel, about 3 miles long, was reported as necessary, descending to the westward with a grade of 100 feet to the mile, which would be the average for 22 miles, to the valley of Los Angeles, the natural grades varying from 90 feet to 171 feet per mile. Thence to the port of San Pedro, 1,892 miles from Fort Smith, the ground was favorable.

Between Fort Smith and San Pedro the sum of the ascents was 24,171 and of descents 24,641 feet, which was estimated as equivalent to an increased horizontal distance of 924.5 miles, or a total equated distance of 2,816 miles.

The general features of the country indicated lines for examination at more than one point which would probably greatly improve the route by reducing the ascents and shortening distances. The exploring party was, however, unable to examine them. The impression given by the description of the route in the report produced in the Secretary of War an opinion that the ground was more favorable than Lieutenant Whipple reported. (Subsequent events have justified this opinion of the Secretary. The well-known characteristics of Lieutenant Whipple caused him to avoid any overstatement of the advantages of the route which he had himself examined. He always kept *within* the *facts*.)

The estimated cost of a railroad from Fort Smith to San Pedro by this route was $169,210,265, and the Secretary believed this estimate to be excessive.

To reach San Francisco by the Tulares and San Joaquin Valleys, the route left the Mojave Valley some 30 miles before reaching the entrance to the Cajon Pass, 1,768 miles from Fort Smith, elevation about 2,555 feet, and proceeded across the southwest corner of the Great Basin towards the Tay-ee-chay-pah Pass, reaching its entrance at an elevation of 3,300 feet in a distance of about 80 miles. From this point the route was coincident with that hereafter described for the thirty-second parallel.

The sum of the ascents from Fort Smith to San Francisco by this route was stated as 25,100 feet; of descents, 25,570—estimated as equivalent to a horizontal distance of 963 miles, or a total equated distance of 3,137 miles.

ROUTE NEAR THE THIRTY-FIFTH PARALLEL, AS ACTUALLY OCCUPIED.

This route has only been completed from Isleta, in Mew Mexico, to Mojave station of the Southern Pacific Railroad, just south of Te-ha-hapa (Tay-ee chay-pah) Pass in California. It has been located from Isleta to Red Fork in the Indian Territory, 4 miles west of the Arkansas River, whence there is a completed line via Vinita, Indian Territory, and Springfield, Mo., to Saint Louis. From Fort Smith a branch is projected to intersect the main line 100 miles west of Tulsa.

Considering the branch from Fort Smith, the located and compl

line is almost exactly coincident with the explored line. The first divergence is at the mouth of Pajarita Creek, where two lines have been surveyed, one along the explored line ascending that stream, and the other following the Canadian some 45 or 50 miles farther, and then deflecting to the southward until it intersects the explored line near Cañon Blanco, when the surveyed and explored lines coincide to Isleta and thence forward as constructed across the greater part of Arizona, to the vicinity of Aztec Pass, when the line diverges to the northward, and reaches the crossing of the Colorado near the Needles, by a route to the westward of that explored. From the crossing of the Colorado the line, as constructed, is nearly or quite straight to Mojave station, whilst the explored line ascended Pah-ute Creek, and crossed to the Sink of Mojave. Ascending that stream it reached Los Angeles via San Bernardino Pass; with a route diverging from it, about 35 miles north of San Bernardino Pass, which, after some indirection, attained Mojave station. It cannot but be remarked how slight these divergences are, the departures in no case exceeding 25 miles, and these for only short distances.

The route of the thirty-fifth parallel so far as constructed may, for all practical purposes, be considered as beginning at Saint Louis, and is composed of the Saint Louis and San Francisco Railway; the Atlantic and Pacific Railroad, and the Colorado Division of the Southern Pacific Railroad.

A gap of about 600 miles now exists between Isleta and the western end of the track of the Saint Louis and San Francisco road. For the time being transportation is carried on by the way of the Atchison, Topeka and Santa Fé Railroad, thus forming a through route from the Mississippi River to the Pacific coast.

The Saint Louis and San Francisco Railway Company is successor to the southwest branch of the Pacific Railroad of Missouri, chartered December 25, 1852, which received a grant of lands and the loan of $4,500,000 Missouri State bonds to aid in its construction. It was opened to Rolla, 113 miles, in December, 1860. Getting into financial difficulty, it was sold in 1866 to a new company which failed to meet its engagements, and was again sold to purchasers who were incorporated as the South Pacific Railroad Company under an act of the general assembly of the State of Missouri, of March 7, 1868. This company completed the road to Lebanon, 71 miles, in 1869; to Springfield, 56 miles farther, in May, 1870, and added another 50 miles, to Pierce City, 290 miles from Saint Louis, in the following September. The road was then sold to the Atlantic and Pacific Railroad Company, which had been chartered by act of Congress of July 27, 1866, and empowered to construct a continuous line of railroad and telegraph from Springfield, Mo., to a point on the Canadian River, thence via Albuquerque, N. Mex., along the thirty-fifth parallel, to the Pacific, with the right to construct a branch from the Canadian River "to a point in the western boundary line of Arkansas, at or near the town of Van Buren." (This was to make the connection with Fort Smith.)

The act gives a land grant of ten alternate sections of land on each side of the road in the States and twenty sections in the Territories, but no other subsidy.

Springfield was made the initial point to avoid conflict with a previous charter for building from Saint Louis southwesterly, given to the South Pacific Railroad Company. As, however, Saint Louis was the natural eastern terminus of a transcontinental road on this route, and as the road from Springfield west could only be constructed economic-

ally after the completion of that portion between Saint Louis and Springfield, the company, immediately after receiving its charter, turned its attention to securing the construction of this eastern division. For this purpose, and that there might be no delay the stockholders of the Atlantic and Pacific Company purchased the stock of the South Pacific, and the two companies became thus substantially identical in ownership and management. The work was rapidly prosecuted from Saint Louis to Springfield under the name of the South Pacific, and thenceforward under the name of the Atlantic and Pacific to the State line. On the 1st of July, 1872, the South Pacific was formally and legally merged in the Atlantic and Pacific by a lease for 999 years, so that the latter company became nominally, as during the construction it was practically, the owner of the entire line from Saint Louis west. By the 14th of October, 1871, the road was fully completed, fully equipped, and in successful operation to Venita, a town in the Indian Territory, about 35 miles west of the western border of Missouri, a total distance of 365 miles.

The foregoing shows what the company had done up to December, 1871, when the last section of its road in the Indian Territory was accepted by the President of the United States.

About this time unseen difficulties arose to prevent the continuous prosecution of the work, and Congress was appealed to by the company to extinguish the Indian title to the lands embraced within the grant, so as to allow settlement to be formed along the road to give it a business in the Indian Territory, but without effect. These circumstances and conditions hindered the progress of construction from 1871 to 1873, when the financial panic or crash occurred, during the continuance of which the building of railroads throughout the country was generally suspended.

The money for completing the South Pacific Road, between Saint Louis and Springfield, and for building the Atlantic and Pacific, from Springfield to Vinita, had been raised upon mortgage bonds, but owing to the circumstances above stated, default was made in the payment of interest and the mortgage was foreclosed, and all of the company's road and property in the State of Missouri was sold under the foreclosure on the 8th of September, 1876, leaving the company with a considerable debt of various kinds and only 35 miles of road in the Indian Territory, with no rolling stock to operate it.

The company remained in this bankrupt or crippled condition until January, 1880, when an agreement was entered into between it and the Saint Louis and San Francisco, and the Atchison, Topeka and Santa Fé, for the resumption of the work of construction from Vinita westward, and westward from Albuquerque on the Rio Grande River.

Under the agreement referred to, the two companies named assumed and paid all of the indebtedness of the Atlantic and Pacific road, excepting a small amount, the payment of the interest upon which they also provided for and pay as the same falls due.

The Atlantic and Pacific being thus relieved, and having its credit restored by the indorsement of the two companies, commenced the work of construction westward from Albuquerque, on the Rio Grande River, in 1880.

In the autumn of 1881 the company began an exploration and survey of its line westward from Vinita, with a view to the rapid construction of its road from that point to Albuquerque. Engineer parties were organized, equipped, and sent into the field, but were hindered from doing any work for several months, and were eventually recalled. In

1882 the work of construction was resumed on this portion of the road, and it it is now completed, and in operation to Red Fork, a short distance beyond the Arkansas, 68 miles west of Vinita, and 432 from Saint Louis.

It is the purpose of the company to extend its road westward to the Rio Grande, a distance of some 600 miles, in the shortest practicable time. There is less necessity, however, for the immediate construction of this portion, because the Atchison, Topeka and Santa Fé Railroad now furnishes a connection between Saint Louis and Isleta, N. Mex., through its southwestern extension from La Junta, upon which grading was begun in May, 1873, and the road opened to Trinidad September 20, 1878, and to the boundary line between Colorado and New Mexico July 10, 1879. On April 14, 1880, it was opened to Albuquerque, and shortly thereafter to Isleta. By this route via Kansas City and La Junta, the distance from Saint Louis to Isleta is 1,211 miles. By the link yet to be constructed between Red Rock and Isleta, it will be nearly 200 miles less.

The work of construction westward from Isleta was begun in May, 1880, jointly by the Atchison, Topeka and Santa Fé, and the Saint Louis and San Francisco railroad companies; to which was afterwards joined the Southern Pacific of California, which was authorized by act of Congress July 27, 1866, to construct the San Francisco connection. With the exception of about six months' delay at Cañon Diablo, during which the grading was carried 150 miles to the westward of that point, track laying continued without interruption until the Colorado River was reached, at the "Needles."

By the close of 1880 the line had been completed to a point 50 miles west of Isleta. During 1881 it was extended 163 miles to Navajo's Spring, on the Puerco of the West, and early in 1882 to Cañon Diablo, 302 miles from Isleta.

As soon as the viaduct across Cañon Diablo was completed so that rails could be sent forward, track laying was resumed early in July, 1882, and before the close of the year the road was in operation to Ash Fork, 391 miles from Isleta. The track was completed to the "Needles," 565 miles from Isleta (575 miles from Albuquerque) on the 15th of June, 1883.

The Southern Pacific Railroad Company of California commenced the construction of its portion of the road, in 1880, at Mojave station, at the foot of Tehachapa Pass, and pushing it forward with a view to reaching the Colorado at the "Needles" at the same time with the track from the eastward, accomplished it about the last of April, 1883, the distance being 243 miles. Some delay occurred in making the connection by the carrying away of the temporary bridge across the Colorado, so that the tracks were not actually joined until some months later, but it is now complete, and trains are now running through the entire distance, a little more than 800 miles, from Isleta to Mojave.

ROUTE NEAR THE THIRTY-SECOND PARALLEL.

Among the considerations which determined the general position of this route for exploration were the low elevation of the mountain passes and their favorable topographical features, the favorable character of the surface generally, the shortness of the line from the navigable waters of the Mississippi to the Pacific, and the temperate climate on the elevated portions.

The explorations from Preston, on Red River, to the Rio Grande were

conducted by Capt. John Pope, Corps of Topographical Engineers; and from the Rio Grande, near Fort Fillmore, to the Pimas villages, on the Gila, by Lieut. John G. Parke, Topographical Engineers. From the Pimas villages to the mouth of the Gila the reconnaissance in New Mexico and California of Maj. W. E. Emory, Topographical Engineers, in 1846, was used; and from the mouth of the Gila to San Francisco the exploration of Lieut. R. S. Williamson, Topographical Engineers, furnished the data.

Fulton, on the Red River, about 150 miles from the Mississippi, was considered the eastern terminus of the route, although the examination of Captain Pope extended only to Preston, 133 miles further west. It was thought that a direct line from Fulton to Colorado Springs, the point on the eastern border of the Staked Plain selected by Captain Pope for crossing it, would give more favorable ground than that traversed by him between Preston and this point, which was 352 miles from Preston and 485 from Fulton.

The exploration of Captain Pope comprised three distinct belts of country, of which the above named was the first. The second was the Staked Plain, the mean elevation of which is about 4,500 feet. This presented no difficulty for 125 miles, when the Pecos River was reached. The total absence of surface water over this portion at certain seasons of the year was not deemed serious, because the geological formation was found to be such as to render probable successful artesian wells, at reasonable depths, and for the further reason that a waterless distance of 125 miles was not thought to form a serious obstacle to the working of a railroad.

Between the Pecos and the Rio Grande, 163 miles, three mountain chains rise from the table-lands, the Guadalupe, Hueco, and Organ Mountains. The first could be crossed at an elevation of 5,717 feet, without a tunnel, with a grade of 108 feet to the mile for 22 miles. The second could be crossed at the Waco (Hueco) Pass under still more favorable conditions, the greatest grade being 80 feet to the mile, and the elevation of the summit 4,812 feet. The third could be turned just before reaching the Rio Grande at Molino and El Paso.

The mountains in this portion of the western part of the continent have no intervening deep secondary valleys between the main chain and the plains, and over the usual uniform and smooth surface of the latter, the general elevation of which is from 4,000 to 4,500 feet, the line entered the valley of the Rio Grande near Molino at an elevation of 3,830 feet, 787 miles from Fulton.

The region between the Rio Grande and the Pimas villages was described as a great plain, presenting no difficulty, interrupted irregularly and confusedly by bare, rugged, abrupt, isolated mountains or short ranges, around or through the passes in which a railroad might be constructed with practicable grades, the mean elevation of this plain being about 4,100 feet, and the mean elevation of the summits of the passes 4,700 feet; the highest, through the Chiricahua Range, being 5,180 feet.

The scarcity of permanent supplies of water for long distances in crossing this district was fully discussed. The survey of Lieutenant Parke, made during the driest season of the year, divided the distance between the Rio Grande and the Gila into five spaces, varying from 80 to 53 miles in length, at the termination of which, respectively, were found large supplies of permanent water, and this was assumed to be sufficient, though it was thought that further and abundant supplies could be obtained by sinking wells.

Lieutenant Parke proposed that the line leave the Rio Grande near

Fort Fillmore, 35 miles from Molino, and enter the valley of the Gila near the Pimas villages, the elevation above the sea being 1,365 feet; thence follow the Gila to its junction with the Colorado, a distance of 223 miles, with an easy slope and no difficulties to impede construction. San Diego would then be the nearest port in United States territory, but the difficult character of the intervening country would force the route northward to the San Gorgonio Pass, considered to be for this route the most favorable of the passes explored by Lieutenant Williamson in the Coast Range. The entrance to this pass is 133 miles from the north of the Gila in a straight line over the desert, with no difficulty in the way.

From San Gorgonio Pass San Diego and San Pedro could be reached by lines of nearly equal length. The route to San Pedro would be somewhat more favorable, and for that reason was preferred.

The length of this route from Fulton to San Pedro was stated to be 1,618 miles, the sum of ascents and descents 32,784 feet, equivalent in the working of a railroad to a horizontal distance of 621 miles, thus giving 2,239 miles as the equated distance. The estimate of the cost was $68,970,000.

For a connection with the bay of San Francisco the most direct route from the San Gorgonio Pass would be through one of the passes leading from the plain of Los Angeles to the valley of Salinas River. But the practicability of these passes had not been determined, and with the information in possession the bay of San Francisco must be reached by crossing the Coast Range to the Great Basin, passing over its southwestern extremity, then crossing the Sierra Nevada and descending to the Tulares Valley. The route suggested was to descend from the summit of the San Gorgonio Pass to the town of San Bernardino, then to the Mission and Low Pass of San Fernando, about 100 miles from San Gorgonio.

The San Fernando Pass is about 8 miles through. Its summit was found to be 1,949 feet above the sea, and there a tunnel of one-third of a mile in length would be required. After descending for about 4 miles the ascent to the New Pass would be begun and the summit attained in 29 miles, at an elevation of 3,164 feet. Thence the descent to the Great Basin would be made, the lowest level being 2,900 feet. After that the route would lie through the Tah-ee chay-pah (Tehachapi) Pass to the Tulares Valley, a distance of 70 miles.

The Tah-ee chay-pah Pass, first explored by Lieut. R. S. Williamson, was found to be the most favorable in this part of the Sierra Nevada, its summit being a nearly horizontal prairie for 7½ miles, with an easy ascent for 21 miles from the Great Basin. The elevation of its entrance is 3,300 feet.

The descent to the Tulares Valley by the natural slopes was made in 15½ miles, which could be extended to 21 miles, giving easier grades and entering the valley at an elevation of 1,489 feet.

From the Tulares Valley it was practicable to reach the navigable waters of San Francisco in several ways.

The eastern side of the Tulares and San Joaquin Valleys is intersected by numerous streams from the Sierra Nevada. The western is bounded by the Coast Chain, and has but few streams. Along that part of the Tulares Valley between Keru and San Joaquin Rivers, a space of 150 miles, it would be advisable to keep near the foot slopes of the mountains. The distance between Tah-ee-chay-pah Pass and Martinez Straits would be 288 miles.

The most direct route from Tah-ee-chay-pah Pass to San Francisco would

be through one of the passes in the mountain range separating the Tulares and San Joaquin Valleys from those of the Salinas and San José Rivers. The distance through it is about 10 miles. The route should cross from Tah-ee-chay-pah Pass to the western side of the Tulares Valley, around the head of the lakes, and enter the Salinas Valley as soon as practicable.

From Fulton to San Francisco the distance was stated to be 2,039 miles; the sum of the ascents and descents 42,008 feet, equivalent to 795 miles; the equated length 2,834 miles; and the estimated cost $93,120,000.

The survey of a route from the bay of San Francisco to the junction of the Gila and Colorado Rivers, connecting with the ports of San Pedro and San Diego on the one side, and on the other with the most practicable mountain passes, was intrusted to Lieutenant Williamson, assisted by Lieutenant Parke, both of the Topographical Engineers, United States Army. The examination of the middle section was made by Lieutenant Parke, and the eastern by Captain Pope, assisted by Lieutenant Garrard, of the cavalry. All these examinations, though made with small means, under disadvantageous circumstances, proved highly satisfactory.

It was remarked that the estimated influence of ascents and descents upon the expense of operating a road would be subject to increase when the minor undulations of the ground came to be measured, and would be greatest where the features of the country were least regular. The equated distances would also affect the cost of working a road only under certain circumstances, which might or might not exist upon a particular route.

Upon the whole, the Secretary was decidedly of opinion that the so-called thirty-second parallel route was "the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean." How far he was influenced in this opinion by local proclivities we have no means of ascertaining. It was known to be a favorite project of his, and the results of the examinations certainly tended strongly to confirm this opinion. However, the fact now is that each of the routes explored has been occupied by a completed road. In some cases the difficulties have practically disappeared under close and accurate surveys, and in all have been greatly ameliorated. A comparison of the routes as explored with those actually built upon is made on the accompanying map, and the accordance of the two cannot but be considered remarkable in view of the fact that the preliminary examinations were completed in so short a time, at so little comparative cost, with limited appliances, and over so much unknown territory. Never was money better expended by our Government, and the results have been a complete reply to the criticisms made at the time by those who opposed the expenditure (a considerable faction) and the ridicule which partisan writers and speakers sought to cast upon the so-called "picture-books" comprising the elaborate reports of the exploring parties.

The results attained never could have been accomplished except through the enthusiastic interest felt in the work by all connected with it, and it is a matter of just pride that the Army contributed in so great a degree to the direct development of these great improvements, and, through them, to the welfare of the country.

Other reasons than easier lines have also had their weight in fixing the final location of the different roads. Between the time when the explorations were made and actual construction begun many interests had arisen the tendency of which was to more or less divert the located

lines from those explored. Amongst the more powerful of these were the grants of land by Congress in aid of the construction of several of the roads. Of course it at once became important in such cases that the lines should be located through lands which would have the highest market value, and would be the first to induce settlement and improvement, with resulting local business. This was a perfectly legitimate transaction, and is mentioned, not for the purpose of criticising it, but merely to show why the lines actually built upon do not in every case conform more strictly to the explored lines.

ROUTE NEAR THE THIRTY-SECOND PARALLEL AS ACTUALLY OCCUPIED.

The close accord between the explored and constructed lines along this route is quite remarkable. The Saint Louis, Iron Mountain and Southern Railroad, as it now exists, starting from Saint Louis and joined at Little Rock by the Memphis and Little Rock Railroad, passes directly through Fulton, and at Texarkana joins the Transcontinental Division of the Texas Pacific Railway; then proceeds westward to Sherman, less than 20 miles south of Preston. This division has not been extended any further to the westward, but using the track of the Missouri, Kansas and Texas Railroad, reaches Fort Worth, at the eastern end of the Rio Grande Division of the Texas and Pacific Railway. The constructed line then gradually approaches the explored line until they are practically coincident at Colorado Springs, when they gradually diverge until they are 50 miles apart at the crossing of the Pecos, to unite again at El Paso.

Starting at San Antonio, the explored and constructed lines coincide until the divide between Devil's River and the Pecos is reached, when they diverge, the former following the Pecos until a junction is made on the boundary between Texas and New Mexico, whilst the latter pursues a more southerly route to El Paso, the greatest divergence being about 90 miles.

The explored route then followed the valley of the Rio Grande to Mesilla, and thence to the present Zuñi station of the Southern Pacific Railroad, where the constructed line direct from El Paso to that point (a distance of only 77 miles) joins it; and from there through to Tucson, Yuma, San Gorgonio Pass, Los Angeles, San Fernando Pass, and Tehachapa Pass, to Goshen, a distance of 880 miles, they are almost absolutely identical. From Goshen the Central Pacific has occupied the explored line to San Francisco by way of the San Joaquin Valley; and the Southern Pacific Railroad of California has occupied a considerable portion of the other routes, by way of Huron and the Santa Clara and the Salinas and Benito Valleys.

There was no practical difficulty in the way to prevent the constructed line from occupying the explored line, and the divergences referred to have been caused entirely by other reasons.

SOUTHERN PACIFIC RAILROAD.

Because the railroad known under this name, and which occupies so much of both the thirty-fifth and thirty-second parallel routes, was mainly built from the Pacific coast *eastward*, the history of its construction is taken up at the western end.

From statements deemed trustworthy it appears that the Southern Pacific Railroad was commenced at San Francisco in the year 1865. It was chartered under the laws of California, December 2, 1865, and by

its charter and the act of Congress of July 27, 1866, was authorized to construct a railraod and connect with the Atlantic and Pacific Railroad near the boundary line of the State of California, and to aid in such construction it was to have grants of land similar to those of the Atlantic and Pacific. The terms of the act of July 27, 1866, were accepted November 24, and acceptance filed in the Department of the Interior December 21, 1866. About the year 1868 it was completed to San José, 50 miles. From San José the line was pushed slowly southward for nearly 100 miles, along the Santa Clara and Salinas Valleys, a short distance from the coast, and practically along the explored line.

October 11, 1870, the Southern Pacific Railroad was consolidated with the San Francisco and San José Railroad (chartered August 8, 1860), the Santa Clara and Pajaro Valley Railroad (chartered January 2, 1868), and the California Southern Railroad (chartered January 22, 1870), under the corporate name of "The Southern Pacific Railroad Company." All these companies had been chartered by the State of California.

The object of this new corporation was to "construct and operate a line of railroad from San Francisco to a point on the Colorado River near the southeastern boundary of California, a distance of about 722 miles, with a branch from Tehachapa Pass to Colorado River at or near Fort Mojave, a distance of about 308 miles, and such other branches as the board of directors may decide to establish."

Soon after the completion of the Central Pacific Railroad that company sent out surveying parties on what is termed the Oregon Branch, and also into that portion of the State known as the Upper San Joaquin Valley. On the 13th of January, 1870, an engineering party was started from Lathrop, on the Central Pacific road, to locate a line to the southward along the San Joaquin Valley, the floor of which was found to have a remarkable uniform ascent from tide-water to the foot of the Sierra Nevada Range. The locating party continued on to Goshen, a distance of 147 miles. The road was completed to Merced, 58 miles, on April 1, 1872, and in 57 days thereafter to Fresno, 113 miles from Lathrop. On the 25th July, 1872, the road was completed and in running order to Goshen, the point where the located line of the Southern Pacific Railroad intersects it.

Between the coast line and Goshen a formidable wall of mountains intervenes (mentioned in Lieutenant Williamson's report of his exploration), and the Southern Pacific Company deemed it advisable to commence construction at the latter point, leaving a gap of 100 miles *via* the San Benito route, or 160 miles *via* the Polonio Pass route, between the northern and the southern divisions of its road, the connection being meanwhile made over the San Joaquin Branch of the Central Pacific. On July 25, 1872, the Southern Pacific was completed to Tipton, 21 miles; 21 miles more, to Delano, were added by July 14, 1873; then 29 miles, to Lerdo, August 1, 1874, and to Sumner, 23 miles, October 26, 1874. On April 26, 1875, the road was completed 22 miles further, to the foot of the Tehachapa Mountains at Caliente, 336 miles from San Francisco. Meantime a heavy force was employed in penetrating the Sierra Nevadas through Tehachapa Pass, at an elevation of about 4,000 feet; in tunneling the Sierra Madre at San Fernando Pass, near Los Angeles, at an elevation of about 2,800 feet; and in recrossing the Sierra Madre by San Gorgonio Pass, 2,560 feet above tide.

The company was required to complete the line to Los Angeles within the year 1876, and to complete 50 miles yearly of the extension between Tehachapa and Yuma. To do this it was necessary to construct from the coast port of Los Angeles both ways. The section from Los Angeles

northward to San Fernando, 20 miles, was finished by the 15th of April, 1874, and that from Los Angeles eastward to Spadra, 29 miles, was completed on the same day. By the 16th July, 1875, the road had been extended from Spadra to Colton, 28 miles, and on January 1, 1876, northward from San Fernando to the tunnel. May 26, 1876, the road was opened from Caliente to Keene, 13 miles, and on the 9th of August to Mojave, 32 miles further. (At this station was subsequently started the branch to connect with the thirty-fifth parallel route.) There was now a gap of 73 miles to close before the connection with Los Angeles was complete, and this was done on the 6th September, 1876, or in less than one month. The line was then in running order to Colton, 57 miles east of Los Angeles, with branch lines from Los Angeles west to the coast at Santa Monica, 16 miles, and south to Wilmington, 21 miles, as well as southwest to the town of Anaheim, 31 miles. Everything was in excellent shape for a rapid extension of the road from Colton southeastward to Yuma, and this was done with the greatest energy.

Upon leaving San Gorgonio Pass the route entered the "Colorado Desert," where the road for 160 miles traverses a region so dry and hot that no trace of vegetation is found except a few scattering cactus plants, and at "Flowing Wells" descends 266 feet below the sea-level. Potable water is to be had at only one or two places in the entire distance. One of these was reached at Dos Palmas, 102 miles from Colton, early in 1877; and on May 23, 1877, the road reached Yuma, on the Colorado River, 191 miles from Colton, 248 miles from Los Angeles, 490 miles from Goshen, and by continuous rail 725 miles from Oakland, opposite San Francisco.

In addition to the foregoing, 40 miles of road from Goshen to Huron were completed on February 1, 1877. It is intended to eventually extend this to a connection with the lines of the Southern Pacific Railroad, thus closing the gaps which now exist and which have been already referred to.

The country east of Yuma is part of the same Colorado Desert, and for 150 miles is destitute of water, except that found in the Gila River.

The sufferings of troops, emigrants, and travelers in crossing these wastes have been terrible, and form the refrain of all who have written or told of them.

In pushing the road forward it was incumbent upon all concerned to make every possible preparation to meet the dreaded difficulties. It was necessary to organize water-trains for the use of engines, men, and animals, to accumulate materials and supplies to such an extent that the work once begun should be completed in the shortest practicable time, and to have in readiness as large a laboring force as could work to advantage. From Yuma eastward the road had no charter from Congress, and no aid from the Government, except such as could be rendered by the military authorities in the way of protecting the workmen from Indian raids.

During the year 1877 the bridge was built over the Colorado at Yuma, and two new corporations were organized for the purpose of forming eastern connections with this road, one under the laws of the Territory of Arizona and the other under the laws of the Territory of New Mexico.

On the 7th of October, 1878, the Southern Pacific Railroad of Arizona was incorporated, and on the 19th of November ground was broken at Yuma, and half a mile of track was laid the same day. By January 8, 1879, the road was completed and opened to Adonde, 30 miles; on February 1, 35 miles further; on March 3, 20 miles beyond; on March 31, to Gila Bend, 34 miles, or 120 miles from Yuma. The

track reached Maricopa, 156 miles from Yuma, April 28, 1879, and then entered the valley of the Santa Cruz. May 19, the road reached Casa Grande, 183 miles from Yuma and 908 from Oakland. The desert had now been passed, and a rest was taken until January 26, 1880, when work was resumed and continued without cessation until on March 20 the track was completed to Tucson, 250 miles from Yuma. It then continued eastward, reaching Benson, 46 miles east of Tucson, on June 22, and Deming, 220 miles, on the 15th of December, where on March 18, 1881, it was joined by the Atchison, Topeka and Santa Fé Railroad, thus forming another through line across the continent.

The construction force kept right on from Deming, never having stopped a day after work was resumed at Casa Grande. On May 19, 1881, touching the northeast corner of the sister republic of Mexico, it reached El Paso, 1,281 miles from Oakland (1,286 from San Francisco), being the first railroad to that point and a year ahead of the requirement of its charter.

It is not a little remarkable that the first railway train to enter the isolated town of El Paso should have done so from San Francisco.

From the nature of the country traversed and the little-known conditions of the rainfall and water-courses, it had been necessary to lay the rails with great rapidity from one point of convenient water to another, and leave the important structures, such as stations and water-tanks, to be perfected afterwards. In some cases artesian wells (so called) of great depth were sunk.

Continuing eastward, the Southern Pacific formed a junction with the Texas and Pacific Railroad at Sierra Blanca, 91 miles from El Paso, on the 6th of December, 1881, and established another transcontinental line. The road was rapidly extended from Sierra Blanca towards San Antonio, to meet a westward extension of the Galveston, Harrisburg and San Antonio Railway from that place, and largely owned in the same interest. Connection was made between the two on the 12th January, 1883, thus establishing a third transcontinental route through the system of railroads concentrating at San Antonio, and bringing the Gulf cities of Galveston and New Orleans into direct relations with the Pacific coast.

This road skirts our southern boundary for more than a thousand miles, and with the branch line of the Atchison, Topeka and Santa Fé Railroad south from the vicinity of Tucson (Benson) forms a complete line of military communication along nearly the whole of the Mexican frontier, and contributes immensely to our interest in our relations with that country.

TEXAS AND PACIFIC RAILROAD AS CONSTRUCTED.

For more than 800 miles westward from the Louisiana State line this road occupies the thirty-second parallel route. The Texas Pacific Railroad Company was organized under act of Congress of March 3, 1871, and the general railroad laws of the State of Texas, and was authorized to construct a road from Marshall, Tex., *via* El Paso, through New Mexico and Arizona, to a point on the Colorado River at or near the southeastern boundary of the State, thence to San Diego, pursuing in the location throughout, as near as possible, the thirty-second parallel of latitude.

It was granted forty sections of public land per mile in the Territories and twenty sections per mile in the State of California. By the laws of

Texas it became entitled to a land grant of sixteen sections per mile of road constructed in that State.

It acquired the properties of the Southern Pacific Railroad Company (of Texas), March 21, 1872, the Southern Transcontinental Railway Company, March 30, 1872, and the Memphis, El Paso and Pacific Railroad Company. The Southern Pacific Railroad Company (of Texas) was a consolidation of the Vicksburg, Shreveport and Texas, chartered in Louisiana, and the Southern Pacific, organized under the laws of Texas. That portion of the line in Louisiana, about 20 miles, was built by the Vicksburg, Shreveport and Texas Company; the section from the east line of Texas to Longview, Tex., about 40 miles, by the Southern Pacific Company. The rest of the line in Texas was built by the present company.

By act of Congress of May 2, 1872, the name of the company was changed to the Texas and Pacific Railway Company.

A map of the proposed route from El Paso, Tex., to San Diego, Cal. was filed in the General Land Office September 2, 1871, but the occupation of so much of this line as lies between El Paso and Yuma by the Southern Pacific Railroad of Arizona and New Mexico having been first accomplished, that portion of the original project seems to have been abandoned for the present.

The road so far as built has been located upon a remarkably direct line, with very moderate grades and curves.

In 1871 the route was opened for a distance of 30 miles west of Marshall, Tex., that place being also connected with Shreveport, 40 miles to the eastward. The work of construction was pushed with considerable vigor until the company became embarrassed from lack of means. However, by the 11th August, 1876, 444 miles of road were in full operation, viz, Shreveport Division, from Shreveport to Marshall, 40 miles; Southern Division, from Marshall to Fort Worth, 180 miles; Jefferson Division, from Marshall to Transcontinental Junction, 69 miles; and Transcontinental Division, from the Junction to Sherman, 155 miles. (The names of these divisions were afterwards changed.)

By the 30th of June, 1880, the road was in operation from Fort Worth westwardly, on what was then called the Rio Grande Division, a distance of 40 miles, with 56 miles yet to be built under the same contract; and the company had contracted for the building of 575 miles more, viz, on the Rio Grande Division, 520 miles, to El Paso, and from Sherman, *via* Whitesborough, to Denton, 55 miles.

During the year ending June 30, 1881, the road was extended westwardly 249 miles, or 289 from Fort Worth, and the entire line constructed from Sherman, *via* Whitesborough and Denton, to Fort Worth, a distance of 89 miles, the whole of this 338 miles being put into full operation.

By deed dated June 21, 1881, the Texas and Pacific was consolidated, under its own name, with the New Orleans Pacific Railway, extending from Shreveport to New Orleans, a distance of about 335 miles, and with the Shreveport Division added became the New Orleans Division. The names of the other divisions were changed, so that the Trans continental Division became merged in the Eastern Division, *via.* Sherman; the Jefferson Division and the Southern Division, consolidated, became the Eastern Division, *via.* Marshal. Westward from Fort Worth to El Paso the name of Rio Grande Division was retained.

On December 6, 1881, the road joined the Southern Pacific at Sierra Blanca, and the railroad route by the thirty-second parallel was complete.

The Texas and Pacific and the Southern Pacific had each graded its own line from Sierra Blanca to El Paso, the two grades being often only a few yards apart. They wisely concluded to put the superstructure upon only one of the grades, and to make common use of the road thus completed.

EFFECT OF RAILWAYS UPON MILITARY OPERATIONS.

Having traced the history of the construction of the transcontinental railways from their inception to the roads in their present condition, it remains to show what their effect has been upon military operations up to this time, and what bearing they will be likely to have upon those of the future.

As early as August 15, 1836, General E. P. Gaines, United States Army' then at headquarters Western Department, Camp Sabine, writing upon the subject of internal improvements (see American Railroad Journal of October 15, 1836, page 642), expressed very broad and enlightened views, and advocated the use of railroads, canals, and steam-power for the purpose of developing our vast territory, increasing our wealth, and improving our means of defense. His idea seems to have been to construct railroads, owned by the Government, from the central portions of our domain towards its frontiers, for the purpose of the rapid transportation of men and munitions of war from points which from their position were perfectly secure from any attack to such points as might be threatened. He asserted that—

> The accomplishment of these works will render our whole country invulnerable in war and afford an increasing revenue in war and in peace that will insure to us in from six to twelve years an amount of money equal to the whole expense of their construction.

General Gaines supported his position by arguments which doubtless seemed unduly enthusiastic at that time. These are too long to quote entire, but, as indicating the scope of his mind, it may be well to reproduce a few of them:

> The loss of a fleet at sea, or of several fleets in succession, added to the loss of our foreign commerce whilst threatened by victorious foreign fleets and armies arrayed against us from without, having our railroads and land forces held ready for action within, we should find perfect security and retain the sure elements of prosperity throughout our national domain. Whereas if we give up the proposed system of railroads, the loss of our fleets would, in effect, be nothing less than the loss of our national existence.
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> This process must and will create a revenue in time of war sufficient to meet the principal expense of the war, and expense be reduced, as it will, in the great item of transportation to a saving of $9 out of every $10, * * * whilst the same cars will be occasionally employed in wielding the disposable force of all the Western States.
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> The proposed railroads, after affording every desirable facility for the most vigorous and successful defense of the country in war, and affording also a revenue sufficient to pay much of the expense of the war, will, on the return of peace, when all other of the most expensive means of national defense known to this or any other nation, such as grand fortifications, armories, arsenals, with cannon and most other military stores (however essential in war), become useless, or more than useless, during a state of peace, because they require constant repairs and an expensive force to take care of them—when these become useless or unprofitable, railroads, with steam-power applied to vehicles of land transportation, taking, as they must take, precisely the direction which the principal commerce of the country takes, viz, from the seaboard to the Central and Western States, they will afford a revenue that will grow with the growth of our population, and as bonds of union and concord to the States and the people will strengthen with our strength until every acre of our soil and every valuable mineral of our mountains and every moment of our time and all our

attainments, with every effort of our labor and industry, will increase in value from 100 to 1,000 per cent. We shall then see and feel the value of practical science and of increased civilization with self-government.

We shall then have it in our power speedily to put an end to every description of war near us which tends to disturb the harmony of the civilized world, and we shall give civilization to our neighboring savages of all colors, and we shall give freedom to all whom we find capable of its enjoyment, or, in other words, capable of self-government.

General Gaines did not cease his agitation of the question with the publication of this letter, but urged his views in every direction in which he thought it possible to make an impression. In 1838 he wrote to the New Orleans Bulletin, presenting his project in some detail, as will appear from the following extract from the editorial columns of that paper:

General Gaines has kindly furnished us with a diagram of a system of railroads, planned by himself, to extend over the United States. An inspection of the diagram shows Kentucky and Tennessee to be the center from which railroads branch out to all points of the Union, connecting, for instance, New Orleans with Portland, in Maine; Buffalo and Plattsburg, in New York; Detroit, in Michigan; Chicago, in Illinois; Charleston, in South Carolina; Fort Gibson, in Arkansas; Saint Louis, in Missouri; and several other points still farther to the Far west. The Work, says General Gaines, is designed in time of war to enable us to wield our fighting men, with their arms and ammunition, from central and middle States to the most vulnerable points of attack on our seaboard and inland border in one-tenth part of the time and at one-tenth part of the expense that movements would cost on ordinary roads. It is a work, moreover, rendered indissoluble by its great and imperishable utility to the States and people in general, giving safety to our national independence, encouragement to literature and science profitable extension to agriculture, and protection to the manufacturing and mechanic arts, thereby tending to make our beloved country prosperous and happy in peace and impregnable in war. This scheme, taken altogether, is grand and sublime, and if carried into effect would make the United States the greatest nation on earth.

Finally, under date of December 31, 1839, General Gaines memorialized Congress upon the subject of the utilization of steam-power for war purposes, and presented his project in detail. It involved the construction of (1) floating batteries for the defense of the seaports and harbors of the United States, and (2) a system of railroads radiating from the two central States of Tennessee and Kentucky, connecting our interior areas with our frontier.

We have nothing special to consider in connection with the suggestion of floating batteries beyond the fact that they were to be iron clad to such an extent as to make them invulnerable to the heaviest guns then afloat.

The second proposition, however, is the one he had most at heart, and expresses the conclusions he had finally reached after some years of thought. His arguments in support of his views are given at length in Report No. 86, House of Representatives, Thirty-seventh Congress, second session, pages 235 *et seq.* He was a bold man who would at that early day so earnestly advocate the construction of 4,200 miles of railroad by the Government through an organization so entirely military as the one set forth, and at an estimated cost of $64,000,000.

General Gaines was so far ahead of his military contemporaries in his conception of the possibilities of railway transportation in war time, that it has been deemed proper to set forth at so much length his claim to priority. His first publication upon the subject (August 15, 1836) was made at a time when the country west of Missouri was almost unknown, when we barely touched the Pacific Ocean with our territory, and long before the most sanguine dreamed of the subsequent development of an empire beyond the then Far West.

That the Government did not adopt his suggestions does not at all

detract from their wisdom. Indeed, the rapid extension of the railroad system of our country, under the enterprise of private capital, rendered it quite unnecessary that the Government should take any active measures within the limits discussed by General Gaines, but the time did come when the General Government found it essential to its existence to seize and operate several of the very lines of road proposed by him, and a wise policy to give active as well as pecuniary aid to others which span the continent.

1. PAST OPERATIONS.

When the subject of the construction of a transcontinental railway was first proposed, the Mississippi River practically constituted our western frontier, and Texas was engaged in her war of independence. The matter had been broached in Congress before that State had come into the Union. When Mr. Douglas introduced his first bill for the construction of a railway the war with Mexico had not begun. When the Mexican war closed there was not a single mile of railroad west of the Mississippi; and it was not until 1859 that the railroad system of the country was connected with the Missouri River by the completion of the Hannibal and Saint Joseph Railroad.

The Army was small, and its operations were limited to movements against the Indians in Florida, and to garrisoning posts along our northern frontier, the Mississippi River posts, those upon the southwestern frontier, and the Atlantic seaboard. The outbreak of the Mexican war called most of these garrisons into the field, and when it terminated we found ourselves with a vast accession of territory and a rapidly increasing population, having a tendency westward. As immigrants pushed into the regions beyond the Mississippi, it became necessary, for their protection, to throw the troops further out, and at the same time a new frontier appeared in the Pacific countries and along the Rio Grande. This created a demand for an increase of the Army, which came in 1855 by the organization of four new regiments, which, with the forces added to the permanent organization during the Mexican war, gave us as the organization of the regular Army 1 company of engineer troops, 5 regiments of cavalry, 4 regiments of artillery, and 10 regiments of infantry. The greater portion of this force was kept constantly on the frontier, moving slowly out as the settlements filled in behind them and grew strong enough to take care of themselves. The frontier on the western border of the Eastern States and Territories and the eastern border of those on the Pacific coast was still well defined. Military operations were carried on by small commands over limited areas, against badly armed Indian enemies, at great cost for transportation and tremendous labor for the troops. As late as 1857 the organization of a small army for what was called the Utah campaign taxed all our resources.

Then came the civil war, with a considerable increase of the regular Army and a subsequent disbandment of hundreds of thousands of volunteers, comprising the most adventurous spirits in the land, whose restless energy ill-fitted them for any but the most active life. From their number many found their way into the haunts of the Indians, and the pressure upon the latter became so great as to cause outbreaks all along the line. Although our Army had been trebled, yet the troops were all employed in guarding the settlers. Their operations were still limited by the difficulty and cost of transporting the requisite supplies.

Finally, the construction of the transcontinental railways was begun, and our frontier commenced its movement along the routes of the sev-

eral roads, and continued until it became a series of lines extending across the continent, each having a frontier looking to the north and to the south. It became easier to supply the troops, and rapid movements characterized all military operations, until Indian outbreaks were reduced from wars to mere raids of short duration, and the Army was reduced to half its previous number. With the aid of the railroads it is now practicable to accomplish more with a hundred men than was formerly possible with a thousand. But we have meanwhile been going through a series of conflicts, growing out of the encroachment of the settlements upon the hunting grounds of the Indians, that taxed every facility and made necessary every soldier we have had. Upon the part of the Indians it was a struggle for existence after the traditions of their race, but the struggle is about ended, and they are face to face with the question whether they shall adopt the white man's methods or perish. Numbering probably not more than 300,000, they occupied an area capable of supporting many millions, and claimed their right to do so, without recognizing the rights of others to equal existence. They added nothing to the sum of human happiness, made no progress in civilization, built no churches, opened no schools, cultivated no ground. If the Army, aided by the railroads, has brought this state of affairs to an end, so much the better for all concerned. The Indians are not decreasing in number; they are only more restricted in their habits. They are on the way to a higher civilization, and with the help that is due them from the white man will accomplish it. This has been attained by a wise policy upon the part of the Government in extending material aid to railroads. Suppose it has cost us large sums in bonds and grants of lands, the investment has been a good one; an opposite course would have cost much more. Estimate the cost at $400,000,000, the saving in mere money in forty years, supposing the same ends could have been gained without the railroads, would amount to as much or more.

Whilst the uses of the westward extensions of the railway system have been of such great importance in dealing with the Indian question, the railroads existing in the settled portions of the country had the most vital bearing upon military operations during the civil war of 1861–'65. It enabled both parties to that conflict to put into the field armies of such magnitude as had been theretofore unknown in civil wars. This was due to the fact that it was possible to supply them over distances which would have otherwise been impracticable with such wagon-roads as then existed. The immediate effect of railway transportation was observable in the highest degree during the Atlanta campaign, when more than a hundred thousand men, with a due proportion of animals, were kept fully supplied at a distance of four hundred miles or more from its base on the Ohio River. All who took part in the campaign will remember with what solicitude that long, slender line of rails was guarded, and what conspicuous gallantry was exhibited on several occasions when guards defended their charge to the utmost, well knowing its importance. But the delivery of supplies from the base was only a small portion of the work done by the railways, since they served to collect them from every imaginable quarter and afforded ready and rapid transportation to the point of concentration. It is not too much to say that without the railways such a campaign with so large a force would have been impracticable.

The foregoing is given as the most prominent illustration in our own history. Neither our policy nor our experience indicates such elabo-

rate preparation for the military use of railways as obtains in foreign countries.

During the civil war the military authorities operated fifty railroads, having an aggregate length of 2,630 miles, with 433 engines and 6,605 cars.

2. Future operations.

It is not so easy to point out the effect which our extensive railway system will have upon future military operations, nor would it perhaps be wise to go into a comprehensive discussion of the subject. But there are certain considerations which may well be presented. The first of these relates to the numbers which our country in case of need can put into the field and supply.

Our population is now sufficiently great to admit of the formation of armies of any size that may be desired. Our railway mileage is in the neighborhood of 115,000 miles, penetrating every part of our vast domain, and especially those regions from which supplies would be drawn. It is not probable that a foreign foe will ever undertake an invasion of our country, but should such an event occur we would not be called upon to organize forces at all comparable in number with those used during the civil war, and the ease with which they could be supplied goes without saying. With our great extent of vulnerable coast it would be a simple matter for an enemy to land an invading force, but before it could be prepared to move inland it would be opposed by an army amply sufficient to destroy it, drawn from every direction and concentrated by means of the railways. With harmony existing among our people, as at present, a successful invasion of our territory may well be considered impracticable.

Second, our aggressive power has been magnified almost beyond conception. We now have a completed railway along each of our land frontiers, and these will serve to prevent any invasion by land into the sparsely settled portions of our country, whilst they afford us the means of invading the neighboring territory at any point we please. In case of a war with a foreign power, involving either of our neighbors, our true policy would be to take the offensive at once, with armies sufficient to overwhelm our enemy in the shortest time and overrun his country. This condition of things must grow more favorable to us with each mile of railway constructed to an intersection with either the Northern Pacific or the Southern Pacific Railroad, the two great military lines, and it is the part of wisdom to encourage all such constructions, as well as all roads leading from these two main lines to our frontiers.

God forbid that we should ever find it necessary to use these railways for war purposes. Far better that they always bear the burdens of peaceful commerce, and thus serve to improve the cordial relations now existing. But if the time should come when their use as auxiliaries is required, their value will be inestimable.

All reference to the railroad systems of our neighbors is purposely omitted.

Third, the extension of railroads into the regions heretofore occupied by the Indians indicates a different distribution of our small Amy, which should be concentrated at comfortable posts of considerable size, located in the vicinity of the railroads. Distributed in this manner, the troops can be more readily instructed and disciplined, they can be supplied and maintained at a great reduction of cost, and will always be ready in sufficient numbers to be transported by rail to the best point without waiting for concentration. By this course an Indian campaign ought

o be completed in as many weeks as it formerly required months. And with the same army a larger force can take the field, or if the force now used in the field be considered sufficient, the aggregate of the Army can be reduced. The localities where troops may be needed are diminishing in number from year to year, and it will not be long before a mere guard to look after the public property will be all that will be required at most of them.

Fourth, by a free use of railroad rather than wagon transportation the cost of this large item of Army administration will be largely reduced. This is practicable only when the troops are stationed on or near the railroads. Celerity of movement being of the first importance, it is desirable to obtain it even if the cost be not reduced. When it can be obtained, and at the same time at less cost, so much the better. The way to do this is to concentrate the troops at posts in the vicinity of the railroads.

Those whose duty it is to attend to the matters of supply and transportation should make a special and continued study of this subject, with a view to the readiest and most complete utilization of the facilities afforded by the railways.

A.—*Statement showing rates for passengers and freight paid in currency by the Quartermaster's Department for the transportation of United States troops and military stores between New York City and San Francisco via the Isthmus of Panama, from January 1, 1855, to June 30, 1883.*

Year.	Officers.	Soldiers.	Stores.	Remarks.
1855..	$300 00	$125 00	No payment for freight found	
1856..	300 00	125 00	..... do	
1857..	300 00 275 00	100 00 125 00	..... do	
1858..	300 00	145 00 125 00	Baggage in excess of 50 pounds 20 cents per pound.	
1859..	120 00	57 00	Baggage in excess of 50 pounds 10 cents per pound.	To Vancouver: Officers, $140; soldiers, $65.
1860..	190 00	75 00	..... do Stores, 18 cents per pound	
1861..	225 00 250 00	100 00 125 00	..... do Ordnance stores, $3.50 per cubic foot	New York to San Francisco. San Francisco to New York.
1862..	250 00	125 00	Merchandise, $3.50 per cubic foot Merchandise stores, 10 cents per pound Fast freight, 10 cents per pound	San Francisco to New York.
1863..	250 00 225 00	.....	.....	
1864..	250 00	175 00 100 00	.....	
1865..	375 00 300 00 192 50	200 00 100 00 52 50	.....	
1866..	300 00	100 00	$2.70 currency per cubic foot	For a portion of this year $250 per officer and $75 per soldier.
1867..	250 00	75 00	10 cents per pound for all in excess of 50 pounds.	
1868..	100 00	45 00	10 cents per pound in excess of 100 pounds Merchandise, $1.65 per cubic foot	
1869..	225 00	75 00	Merchandise, fast freight, $3.50 per cubic foot. Merchandise, slow freight, $1.50 per cubic foot. Merchandise, slow freight, $1.00 per cubic foot.	Premium gold, 38½ per cent. Premium gold, 38½ per cent. Premium gold, 13⅓ per cent.
1870..	150 00	60 00	.....	
1871..	150 00	60 00	Merchandise, slow freight, $1.00 per cubic foot.	Premium gold, 11 per cent.
1872..	(*)	.....	Ordnance stores, fast freight, $1.50 per cubic foot.	Gold, $1.14.
1873..	(†)	60 00	Merchandise, slow freight, $1.00 per cubic foot.	Gold, $1.17½.

* No payment found. † No payment.

B.—*Statement showing rates paid in currency by the Quartermaster's Department for the transportation of United States military stores between New York City and San Francisco via Cape Horn from* 1855 *to* 1864.

Year.	Per 100 pounds.	Remarks.
1855	$2.00	60 cents per cubic foot.
1856	1,059, or $21.18 per ton.	Heavy freight. Light freight, 37½ cents per cubic foot.
1857	1.50	Fixed ammunition.
	1.20	Powder.
1858		Subsistence stores, $2.60 per barrel; boxes, 30 cents per cubic foot.
1859	0.50	Ordnance stores. Miscellaneous stores, 25 cents per cubic foot.
1860	2.50	Loose muskets.
	0.50	Shells. Miscellaneous stores, 30 cents per cubic foot.
1861		Miscellaneous stores, 30 cents per cubic foot.
1862	0.75	Miscellaneous stores. Ordnance stores, 33⅓ cents per cubic foot; per barrel, $1.50.
1863	0.75	Do.
		Do.
1864	1.25	Pig lead. Ordnance stores, 40 cents per cubic foot; powder, 50 cents, and subsistence stores, 35 cents per cubic foot.

C.—*Statement showing rates paid in currency by the Quartermaster's Department for the transportation, by wagon, of United States military stores, between Fort Leavenworth, Kans., and Fort Union, N. Mex., from* 1855 *to* 1870.

Year.	Per 100 lbs. per 100 miles.	Remarks.	Year.	Per 100 lbs. per 100 miles.	Remarks.
1855	$2 24	Average April to December, inclusive.	1863	$1 84	Average entire year.
			1864	2 03	Average June to December, inclusive.
1856	2 32	Average entire year.			
1857	2 15	Average March to December, inclusive.	1865	2 00	Average entire year.
			1866	1 38	Do.
1858	2 10	Average entire year.	1867	1 40	Do.
1859	2 00	Do.	1868	1 42	Average April to December, inclusive.
1860	1 46	Average May to December, inclusive.	1869	1 47	Average entire year.
1861	1 40	Average entire year.	1870	1 43	Do.
1862	1 65	Do.			

D.—*Statement showing rates for passengers and freight paid in currency by the Quartermaster's Department for the transportation of U. S. troops and military stores between New York City and San Francisco via the Pacific railroads from the date of their opening for transportation to* 1883.

Year.	Officers and soldiers.	Stores pr. 100 lbs., 3d class rates being about the average of all.	Year.	Officers and soldiers.	Stores pr. 100 lbs., 3d class rates being about the average of all
1869	$142 00	$5 77	1877	$139 00	$4 00
1870	144 95	5 30	1878	139 00	4 00
1871	140 00	4 70	1879	140 00	4 00
1872	140 00	4 85	1880	138 00	4 00
1873	140 00	4 85	1881	138 00	4 00
1874	139 50	1 90	1882	141 80	4 00
1875	138 00	4 00	1883	137 35	4 00
1876	138 00	4 00			

E.—*Cost of transporting troops, &c., reported by the Quartermaster-General November 16, 1854.*

To San Francisco, via the Isthmus: *

Transportation (cost):

Each commissioned officer	$225
Each enlisted man, laundress, &c	150

Subsistence:

The whole subsisted by contractor.

Baggage (allowance):

Each person on the steamer, pounds	100
Each person across the isthmus, do	25

All over the 25 pounds across the isthmus to be paid for at 15 cents per pound.

From San Francisco to Vancouver, or Oregon, in June, 1853:

Transportation (cost):

Each commissioned officer	$75
Each enlisted soldier, &c	40

Stores (cost):

Per ton (in June, 1853)	30
In December, 1853, per ton	$15
In February, 1854, per ton	20

From New Orleans to San Francisco:

Transportation (cost):

For each officer	$300
Each enlisted soldier	150

Including transit of isthmus.

Baggage:

Extra baggage, 15 cents per pound.

Provisions to San Francisco or Fort Vancouver, via the isthmus:

To Aspinwall, per ton	$14
Across the isthmus, per ton	300
From Panama to San Francisco, per ton	80

Say, $394 a ton of 2,000 pounds.

Agents of the line think that when the railroad across the isthmus shall be completed the freight across will not exceed one-fourth of the above, $75 a ton, say, $169 for the whole distance via Cape Horn to San Francisco or Benicia.

From Baltimore, 90 cents per cubic foot, $4.50 per flour barrel.

From New York, $3.70 per barrel for flour, 60 cents per cubic foot for other packages.

Same rates apply to camp and garrison equipage and clothing, as all such freight by sea-going vessels is charged for by the cubic foot.

ORDNANCE AND ORDNANCE STORES.

From New York via Cape Horn:

Heavy ordnance:

In June 1854, per pound	2 cents
In August, per ton	$28 00
In October, per pound	2 cents

Ammunition:

Ammunition, and other boxes, &c., per cubic foot	60 cents

(None sent via the isthmus.)

CONTRACTS FOR TRANSPORTATION OF MILITARY STORES OF ALL KINDS.

From Fort Leavenworth to El Paso, per 100 pounds	$14
From Fort Leavenworth to Fort Fillmore, per 100 pounds	13
From Fort Leavenworth to Albuquerque, per 100 pounds	10
From Fort Leavenworth to Fort Union per, 100 pounds	7

Transportation to Albuquerque estimated at about $15 per man.

* In May, 1854.

TRANSPORTATION OF ARTILLERY AND SUPPLIES.

From Albany to the different points on the frontier at rate of $5 each ton (the daily cost of a wagon and team) for each ten miles, when roads were in best condition —double this in spring and fall of the year—say from 50 cents to $1 a mile for each ton transported. Heavy freight can now (November 16, 1854) be sent to San Francisco at about $15 a ton, and 30 cents per foot for measurement goods, and that a vessel could be chartered for Fort Vancouver at $20 per ton.

F.—*Pacific Railroad lines.*

[An abstract of the history of the construction of the four great routes.]

DEPARTMENT OF THE INTERIOR,
OFFICE OF COMMISSIONER OF RAILROADS,
Washington, August 9, 1883.

SIR: In answer to a communication addressed to the Commissioner of Railroads, July 10, 1883, by Brig.-Gen. O. M. Poe, aid-de-camp to the General of the Army, in which he requests there be furnished him certain information touching the history of the construction of the "transcontinental lines of railroad," I have the honor to submit the following statement, and to request the same be transmitted to him.

The railroads treated of are the Union Pacific and Central Pacific, the Atlantic and Pacific and Southern Pacific, the Texas and Pacific and Southern Pacific of New Mexico, Arizona, and California, and the Northern Pacific. I have endeavored to confine the matter as far as practicable, to that concerning the main lines only, so far as the construction is concerned. In the account given of the business progress the figures represent the operations and equipment of the entire line, unless otherwise specified, as the reports of the companies are made upon that basis.

RAILROAD GRANTS.

On March 2, 1827, Congress granted to the State of Illinois certain lands in aid of the construction of a canal to "connect the waters of Illinois and Lake Michigan." (4 Stat., 234.)

The above act was amended March 2, 1833, and "railroad" substituted for "canal." (4 Stat., 662.)

The first right of way through public lands for a railroad was granted to a Florida company March 3, 1835. (4 Stat., 778.)

The first important railroad act was that of September 20, 1850, "An act granting the right of way and making a grant of land to the States of Illinois, Mississippi, and Alabama, in aid of the construction of a railroad from Chicago to Mobile." (9 Stat., 466.)

Between the date of this act and 1862, when the first Pacific railroad company was incorporated, Congress passed several railroad-grant acts similar in tenor to the act of 1850. (H. R. Ex. Doc. 47, part 4, page 274, Forty-sixth Congress, third session.)

CAUSES WHICH LED TO THE BUILDING OF PACIFIC RAILROADS.

As early as 1838 a public meeting was held at Dubuque, Iowa, for the purpose of expressing opinions favorable to the construction of a railroad to the Pacific coast. (H. R. Ex. Doc. 47, p. 265.)

Public attention was again directed to it, and interest revived about the time of the settlement of the Webster-Ashburton treaty. (H. R. Ex. Doc. 47, p. 265.)

In 1845 Senator Douglas made an address favoring such a project, and prepared bills to promote it by governmental aid. (H. R. Ex. Doc. 47, p. 266.)

A number of like measures were introduced in Congress between the years 1850 and 1862.

Government surveys were authorized by an act of Congress of March 3, 1853, for the purpose of ascertaining the most praticable and economical route for a railroad to the Pacific Ocean. (10 Stats., 219.) These surveys were made under the direction of the War Department during the years 1853 to 1856.

POLITICAL ACTION.

Pending the campaign of 1856 mass meetings were held and legislatures petitioned, so strong was the popular desire to have Congress take some definite action to promote the building of a railroad across the continent.

Both the Republican and Democratic parties adopted resolutions in their conventions of 1856, and again in 1860, pledging themselves in support of it,

The Presidential candidates favored it in their speeches, and Presidents Buchanan

and Lincoln in their messages to Congress recommended legislative aid. (H. R. Ex. Doc. 47, Part 4, pages 266–7, Forty-sixth Congress, third session.)

All these forces bearing upon Congress led to the enactment of a law entitled "An act to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes."

This act was passed July 1, 1862, and was the charter act of the Union Pacific Railroad Company. (12 Stat., 489.)

UNION PACIFIC RAILROAD.

Main line, Omaha, Nebr., to Ogden, Utah, 1,032 miles.

The act of incorporation was formally accepted by the company September 2, 1862, and the acceptance filed in the Department of the Interior June 26, 1863.

For important amendments to original act see act of July 2, 1866 (13 Stat., 356), and act of May 7, 1878 (21 Stat., 56). See also table on page 274 of H. R. Ex. Doc. 47, part 4, for other acts bearing upon this railroad.

CONSTRUCTION OF THE ROAD.

The chief engineer of the road, in his report to the president of the company, dated December 1, 1869, says:

"In 1863 and 1864 surveys were inaugurated, but in 1866 the country was systematically occupied, and day and night, summer and winter, the explorations were pushed forward through dangers and hardships that very few at this date appreciate. As every mile had to be run within the range of the musket there was not a moment's security.

"In making the surveys numbers of our men, some of them the ablest and most promising, were killed, and during the construction our stock was run off by the hundreds, I might add by the thousands. Each day taught us lessons by which we profited the next, and our advances and improvements in the art of railway construction were marked by the progress of the work, forty miles of track having been laid in 1865; two hundred and sixty in 1866, two hundred and forty in 1867, including the ascent to the summit of the Rocky Mountains at an elevation of eight thousand two hundred and thirty-five feet above the ocean; and during 1868, and to May 10, 1869, five hundred and fifty-five miles (were built), all exclusive of side and temporary tracks, of which over one hundred and eighty miles were built in addition.

"The first grading was done in the autumn of 1864, and the first rail laid in July, 1865. * * * All the material and supplies for construction had to be transported hundreds and thousands of miles by teams, or at best by steamboats."

He says further that the lack of confidence in the project, even in the localities to be the most benefited, was so great that the laborers demanded their pay in advance before they would perform a day's work.

The map showing the definite location of the first one hundred miles of road was filed in the General Land Office October 24, 1864; it was amended December 14, 1864.

The map showing the location of the last, or thirteenth hundred mile west from Omaha, was filed January 8, 1869.

Maps showing location of routes between Promontory Summit and Monument Point, Utah, May 10, 1869.

The dates of acceptance of completed sections by the President, are as follows:

	Distance.	Date.
	Miles.	
Omaha to 40th mile-post	40	Jan. 24, 1866.
40th to 65th mile-post	25	May 1, 1866.
65th to 105th mile-post	40	June 25, 1866.
105th to 125th mile-post	20	July 12, 1866.
125th to 160th mile-post	35	Aug. 8, 1866.
160th to 205th mile-post	45	Sept. 8, 1866.
205th to 240th mile-post	35	Oct. 12, 1866.
240th to 270th mile-post	30	Nov. 6, 1866.
270th to 305th mile-post	35	Jan. 2, 1867.
305th to 345th mile-post	40	June 10, 1867.
345th to 385th mile-post	40	July 5, 1867.
385th to 420th mile-post	35	Aug. 27, 1867.
420th to 455th mile-post	35	Oct. 1, 1867.
455th to 490th mile-post	35	Nov. 4, 1867.
490th to 510th mile-post	20	Dec. 11, 1867.
510th to 540th mile-post	30	Jan. 25, 1868.
540th to 560th mile-post	20	May 25, 1868.
560th to 580th mile-post	20	May 16, 1868.
580th to 600th mile-post	20	June 12, 1868.

	Distance.	Date.
	Miles.	
600th to 620th mile-post	20	June 16, 1868.
620th to 640th mile-post	20	July 21, 1868.
640th to 660th mile-post	20	July 23, 1868.
660th to 680th mile-post	20	July 23, 1868.
680th to 700th mile-post	20	Aug. 8, 1868.
700th to 720th mile-post	20	Aug. 27, 1868.
720th to 740th mile-post	20	Sept. 5, 1868.
740th to 760th mile-post	20	Sept. 5, 1868.
760th to 780th mile-post	20	Sept. 28, 1868.
780th to 800th mile-post	20	Oct. 21, 1868.
800th to 820th mile-post	20	Nov. 19, 1868.
820th to 860th mile-post	40	Dec. 5, 1868.
860th to 880th mile-post	20	Dec. 12, 1868.
880th to 900th mile-post	20	Dec. 16, 1868.
900th to 920th mile-post	20	Dec. 23, 1868.
920th to 940th mile-post	20	Dec. 23, 1868.
940th to 960th mile-post	20	Jan. 28, 1869.
960th to 980th mile-post	20	Feb. 9, 1869.
980th to 1000th mile-post	20	Feb. 9, 1869.
1000th to 1085.88 mile-post	85.88	July 15, 1869.

By a joint resolution of April 10, 1869 (16 Stat., 56), it was provided that the common terminus of the Union and Central Pacific Railroads should be at or near Ogden, Utah, and that the Union Pacific Railroad Company should build, and the Central Pacific Company pay for and own, the road from Promontory Summit, 53 miles west from Ogden, from which place said roads should form one continuous line.

The number of miles of road constructed and occupied during each governmental fiscal year was as follows:

Year ending June 30:

1866	105
1867	240
1868	275
1869	380
1870	85.88

OPERATIONS OF THE ROAD.

Up to April 1, 1867, the road was run by the contractors for the line. Since that time it has been run by the company. Its earnings for the quarter ending July 31, 1867, were as follows:

From passenger business	$160,526 92
freight business	549,672 39
transporting mails	13,556 23
Material, &c., for construction	479,283 41
Total	1,203,038 95
Expenses for same period	395,530 92
Net balance	807,508 03

(See Poor's Railroad Manual, 1868-'69, p. 47.)

According to the annual report of the company for the year ending December 31, 1870, its earnings were from—

Passengers	$3,818,627 55
Freight	3,058,514 71
Mail	274,513,58
Express	281,691 76
Miscellaneous	191,929 53
Total	7,625,277 13
Expenses (operating)	4,677,414 84
Net earnings	2,947,862 29
Number of passengers carried one mile	74,917,335
tons of freight carried one mile	71,779,106

ROLLING STOCK BELONGING TO COMPANY.

Locomotive engines	150
Passenger-cars	25
Passenger-cars, emigrant, and caboose	84
Baggage-cars	11
Mail-cars	8
Express cars	8
Freight cars	2,319
Stock cars	48
All others	58

The following tables, compiled from the company's annual reports, show the operations of the road for several different years:

Earnings.	1873.	1876.	1879.	1882.
Passengers	$3,887,204 48	$4,307,602 53	$4,406,797 34	$5,197,730 01
Freight	5,516,907 58	7,304,123 50	12,067,395 26	15,402,167 37
Mail	283,855 00	574,139 00	685,712 70	746,515 61
Express	410,190 76	502,738 42	496,218 28	748,932 30
Miscellaneous	167,945 84	198,255 39	384,142 50	728,538 95
Total	10,266,103 66	12,886,858 84	18,040,266 08	22,823,884 24
Expenses (operating)	4,974,861 02	5,268,211 20	8,368,836 96	10,727,049 48
Net earnings	5,291,242 64	7,618,647 64	9,671,429 12	12,096,834 76

Number of passengers carried one mile:

1873	95,709,054
1876	128,032,924
1879	100,151,148
1882	157,527,336

Tons of freight carried one mile:

1873	223,361,542
1876	292,002,076
1879	436,054,149
1882	732,791,054

Equipment.	1873.	1876.	1879.	1882.
Locomotive engines	151	168	178	344
Passenger cars	97	128	126	120
Sleeping cars	.....	.....	.....	92
Baggage cars	13	21	21	34
Mail cars	9	9	9	8
Express cars	9	9	9	20
Freight cars	2,310	2,940	2,933	6,201
Stock cars	107	120	287	739
Combination—mail, baggage, and express	.....	.....	.....	20

(Figures for 1873 are from Poor's Manual.)

The Union Pacific Railroad Company, the Kansas Pacific Railway Company, and the Denver Pacific Railway and Telegraph Company were consolidated on January 24, 1880, and formed the

UNION PACIFIC RAILWAY COMPANY.

The number of miles of railroad acquired by this consolidation was as follows:

Council Bluffs to Ogden (including Omaha Bridge and approaches)	1,037.4
Ogden to Junction Central Pacific Railroad	5
Kansas City to Denver	638.5
Denver to Cheyenne	106
Leavenworth to Lawrence	34
Total	1,820.9

For the number of miles owned and operated at last report see Report of Commissioner of Railroads for 1881, page 37. (No change was made up to time of 1882 report.)

The records of the General Land Office show the following number of acres of land as having been certified or patented during each of the years given below (act July 1, 1882):

For the year ending June 30—

1871	639,024
1873	15,395. 2
1874	50,733. 3
1875	919,771. 41
1876	219,344. 09
1877	39,211. 58
1878	1,842. 47
1881	640
1882	67,921. 03
1883	640
Total up to June 30, 1883	1,954,523. 08

For condition of the bond and interest and sinking fund accounts see Report of the Commissioner of Railroads for 1882, pages 10 and 11 to 16. Reports of inspection of this road for same year will be found on pages 28 to 36, and 71 to 75.

The reports of the Auditor of Railroad Accounts for 1878, 1879, and 1880, and those of the Commissioner of Railroads for 1881 and 1882, containing matter collected from the reports of the company and inspection trips taken by members of the bureau, will furnish much additional matter of interest.

CENTRAL PACIFIC RAILROAD.

Main line of road: San Francisco to Ogden, Utah, 883.06 miles.

The Central Pacific Railroad Company of California was organized under the general railroad law of California, with authority to construct a railroad from Sacramento to the eastern boundary of that State.

By the act of July 1, 1862 (12 Stat., 489), it was authorized to construct a line from the Pacific coast, at or near San Francisco, or the navigable waters of the Sacramento River to the eastern boundary of the State, upon the same terms and condition granted the Union Pacific Railroad Company; and it further provides that it may continue in constructing, under same conditions, after completing its road across the State, through the Territories, until it shall meet and connect with the last-named road.

The conditions of this act were accepted October 7, 1862, and acceptance filed in the Department of the Interior, December 24, 1862.

Construction was commenced in February, 1863, and by January, 1865, 31 miles of road had been opened; September 4, 1865, 66 miles; November 10, 1866, 94 miles; July, 1867, 105 miles, and by January, 1868, to the eastern boundary of the State, or 138 miles.

In 1868 362 miles were constructed, and the line was opened to Ogden, May 15, 1869, thus, in connection with the Union Pacific, making a continuous line of railroad across the continent.

The Sierra Nevada mountains are crossed at an elevation of 7,042 feet above the level of the sea, the grade averaging from 75 to 105 feet.

The first map of definite location of the line of this road was filed in the General Land Office October 20, 1864, "From Sacramento, Cal., to a point 50 miles east thereof." The sixth and last map was filed October 20, 1868.

Maps of construction have been filed with affidavits of the chief engineer of the company, bearing the dates following:

	Distance.	Date.
	Miles.	
Sacramento, Cal., to the 31st mile post	31	Oct. 19, 1865.
31st to 74th mile post	43	Sept. 28, 1866.
74th to 94th mile post	20	Oct. 1, 1867.
94th to 114th mile post	20	June 16, 1868.
114th to 138th mile post	24	Nov. 14, 1867.
138th to 158th mile post	20	May 2, 1868.
158th to 178th mile post	20	July 2, 1868.
178th to 215th mile post	37	July 28, 1868.
215th to 255th mile post	40	Aug. 8, 1868.
255th to 290th mile post	35	Aug. 29, 1868.
290th to 310th mile post	20	Sept. 7, 1868.
310th to 330th mile post	20	Sept. 10, 1868.
330th to 350th mile post	20	Sept. 26, 1868.

	Distance.	Date.
	Miles.	
350th to 370th mile post	20	Oct. 16, 1868.
370th to 390th mile post	20	Oct. 16, 1868.
390th to 410th mile post	20	Nov. 12, 1868.
410th to 430th mile post	20	Nov. 13, 1868.
430th to 450th mile post	20	Dec. 28, 1868.
450th to 470th mile post	20	Dec. 24, 1868.
470th to 490th mile post	20	Jan. 8, 1869.
490th to 510th mile post	20	Jan. 28, 1869.
510th to 530th mile post	20	Feb. 6, 1869.
530th to 550th mile post	20	Feb. 16, 1869.
550 h to 570th mile post	20	Mar. 12, 1869.
570th to 610th mile post	40	Mar. 30, 1869.
610th to 630th mile post	20	Apr. 5, 1869.
630th to 650th mile post	20	Apr. 13, 1869.
650th to 670th mile post	20	Apr. 28, 1869.
670th to 690.3th mile post	20.3	May 6, 1869.

From the 690.3 mile post to Ogden, Utah, a distance of 53 miles, the road was constructed by the Union Pacific Railroad Company.

The number of miles constructed during each fiscal year was as follows:

Year ending June 30:

1866	31
1867	43
1868	84
1869	532.3

On August 22, 1870, the Central Pacific Railroad Company, the California and Oregon, the San Francisco and Oakland, the San Francisco and Alameda, and the San Joaquin Valley railroads were consolidated under the title of

THE CENTRAL PACIFIC RAILROAD COMPANY.

The following statement from Poor's Railroad Manual for 1871–'72, page 385, shows the operations of the road for the year 1870, also the equipment:

Gross earnings:

Passenger	$4,044,372 05
Freight	3,508,892 09
Other	367,446 84
Total	7,920,710 98
Operating expenses (including taxes)	4,060,564 95
Net earnings	3,860,146 03

Equipment:

Locomotive engines	179
Passenger cars	172
Sleeping cars	21
Mail and express cars	9
Baggage cars	24
Freight cars	3,200
Other cars	445
Snow-plows	7

The following tables are taken from the annual reports of the company:

Earnings.	1873.	1876.	1879.	1882.
Freight	$7,462,894 92	$10,773,618 34	$10,934,573 39	$16,302,882 72
Passenger	4,418,417 42	5,908,821 58	4,919,254 63	7,474,216 12
Express	213,036 90	266,805 73	208,500 79	350,288 21
Mail	269,014 28	250,638 34	417,347 23	613,180 88
Miscellaneous	500,589 40	947,060 38	673,487 12	922,191 19
Total	12,863,952 92	18,146,944 37	17,153,163 16	25,662,757 12
Operating expenses	4,969,271 52	8,732,074 90	11,126,298 10	16,067,183 67
Net earnings	7,894,681 46	9,414,869 47	6,026,865 06	9,595,573 45
Passengers carried	3,280,171	5,772,659	6,842,307	7,868,614
Pounds of freight carried	2,057,204,628	2,886,171,174	3,750,687,240	6,219,392,940

Equipment, owned and leased.	1873.	1876.	1879.	1882.
Locomotive engines	188	228	264	314
Passenger cars	147	190	262	465
Freight cars	3,709	4,668	5,344	9,767
Baggage cars	21	27	48	69
Mail and express cars	19	22	20	35
Sleeping cars	23	41	41	53

Earnings and expenses for 1873 are given in aggregate, gold and currency. Average premium on gold, 12.92 per cent. Currency receipts were sold at a discount of $592,814.97. Net earnings in currency were $8,245,302.54. Figures for the other years are given in currency.

In addition to the car equipment shown above, the company owns a complement of construction, wrecking, and hand cars, and snow-plows.

For their ferry at San Francisco they have a fleet of nine steamers, having an aggregate tonnage of 12,982, besides four river steamers and three barges.

The records of the General Land Office give, as the number of acres of land certified or patented during each Governmental fiscal year, the following figures:

Year ending June 30:

1866	45,510.54
1867	77,257.46
1868	21,618.63
1870	117,138.70
1871	9,480.52
1872	160
1875	70,247.39
1876	82.79
1877	352,662.96
1878	14,703.18
1881	12,572.51
1883	59,444.72
Total (Central Pacific proper)	780,879.40

For condition of the bond and interest and sinking fund accounts, and other matter of interest, in connection herewith, see reports of the Commissioner of Railroads and Auditor of Railroad Accounts, as cited for the Union Pacific.

The foregoing matter furnishes an abstract of the history of construction of the main stem of what might be called the central transcontinental line. The figures showing operation, equipment, &c., are those for the whole lines, owned and leased.

The next line to be considered properly as transcontinental is the

ATLANTIC AND PACIFIC.

LINE OF ROAD.

Springfield, Mo., along the thirty-fifth parallel to the Pacific Ocean, about 2,000 miles.

The Atlantic and Pacific Railroad Company was chartered by an act of Congress passed July 27, 1866: "An act granting lands to aid in the construction of a railroad and telegraph line from the States of Missouri and Arkansas to the Pacific Ocean." (14 Stat., 292.)

This act was accepted November 22, 1866, and acceptance filed in the Department of the Interior November 27, 1866.

On October 25, 1870, this company was consolidated with the South Pacific Railroad Company (originally the Southwest Branch of the Pacific Railroad of Missouri), which was organized under provisions of an act of the general assembly of Missouri March 7, 1868. The South Pacific received a grant of lands under an act of Congress approved July 10, 1852. (10 Stat., 8.)

The Pacific Railroad of Missouri and all its leased lines were leased to the Atlantic and Pacific Railroad Company July 1, 1872, for a term of 999 years.

A tripartite agreement between this company and the Saint Louis and San Francisco and the Atchison, Topeka and Santa Fé Companies, January 31, 1880, provided for the immediate construction of that portion of the road from the Rio Grande River to the Pacific Ocean—or the Western Division.

The work of construction was commenced at Albuquerque, N. Mex., in May, 1880; track laying was begun in July of the same year, and with the exception of six months'

delay in the first half of 1882, caused by the impossibility of getting material across Cañon Diablo, has continued without interruption.

The first map of definite location was filed in the General Land Office December 10, 1870, "From Springfield, Mo., to Neosho, Mo." The last map for main line was filed August 15, 1872.

CONSTRUCTION.

Affidavits of the chief engineer of the company, on file in the General Land Office, give dates of completion of sections as follows:

	Distance.	Date.
	Miles.	
First 25 miles west from Springfield	25	Sept. 27, 1870.
Second 25 miles west from Springfield	25	Sept. 27, 1870.
Third 25 miles west from Springfield	25	Dec. 29, 1870.
Fourth 25 miles west from Springfield	25	Oct. 14, 1871.
Fifth 25 miles west from Springfield	25	Oct. 14, 1871.
Sixth 25 miles west from Springfield	25	Nov. 20, 1882.
Seventh 25 miles west from Springfield	25	Nov. 20, 1882.
First 25 miles west from Isleta, N. Mex	25	Nov. 10, 1880.
Second 25 miles west from Isleta, N. Mex	25	Nov. 10, 1880.
Third 25 miles west from Isleta, N. Mex	25	Feb. 28, 1881.
Fourth 25 miles west from Isleta, N. Mex	25	Feb. 28, 1881.
Fifth 25 miles west from Isleta, N. Mex	25	Mar. 25, 1881.
Sixth 25 miles west from Isleta, N. Mex	25	Apr. 22, 1881.
Seventh 25 miles west from Isleta, N. Mex	25	June 9, 1881.
Eighth 25 miles west from Isleta, N. Mex	25	July 5, 1881.
Ninth 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.
Tenth 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.
Eleventh 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.
Twelfth 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.
Thirteenth 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.
Fourteenth 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.
Fifteenth 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.
Sixteenth 25 miles west from Isleta, N. Mex	25	Dec. 1, 1882.

Constructed during the year ending June 30:

	Miles.
1871	75
1872	50
1881	175
1882	25
1883	250
Total	575

This road has been constructed west from Springfield, Mo., as far as the Arkansas River, in Indian Territory, and from Isleta, N. Mex., to the Colorado River, but as yet is not a matter of record in the Department, and dates cannot be given further.

REFERENCES.

Report Auditor of Railroad Accounts, 1880, page 51.
Report Commissioner of Railroads, 1881, pages 28, 46.
Report Commissioner of Railroads, 1882, pages 53, 85.

By an agreement, the Southern Pacific is to meet the main line of the Atlantic and Pacific with its Mojave branch at the crossing of the Great Colorado River, at a point near the Needles; when completed, the whole line will be operated through via Albuquerque and the Atchison, Topeka and Santa Fé Railroad, upon an agreed traffic basis for a term of years. (Poor's Manual, 1882.)

The following figures show the number of acres of land certified or patented up to June 30, 1883, under act incorporating this road:

Year ending June 30:	
1871	491,912.79
1872	3,131.71
1873	3,669.01
1874	941.13
1875	3,648.78
1876	642.94
1881	23,037.36
Total	526,991.12

Owing to the incomplete state of this road up to the last year, and the expenses attendant upon construction constantly to be met, no intelligent comparison can be made of its operations without going into details too voluminous for a matter of this kind.

The Southern route may be said to comprise the following railroads:

	Miles.
Texas and Pacific, New Orleans to El Paso, Tex	1,163
Southern Pacific, of Arizona, New Mexico, and California; El Paso to Tulare, Cal	1,035
Central Pacific (leased line), Tulare to San Francisco	251
Making a total of	2,439

TEXAS AND PACIFIC.

LINE OF ROAD.

Marshall, Tex., to San Diego, Cal., about 2,000 miles.

The Texas Pacific Railroad Company was incorporated by an act of Congress, March 3, 1871, "An act to incorporate the Texas Pacific Railroad Company, and aid in the construction of its road, and for other purposes." (16 Stat., 573.)

By this act the company was authorized to construct a road from Marshall, Tex., via El Paso, through New Mexico and Arizona, to a point on the Rio Colorado, at or near the southeastern boundary of the State of California, thence to San Diego, pursuing in the location throughout, as near as possible, the thirty-second parallel north latitude.

A map of the proposed route of the road from El Paso, Tex., to San Diego, Cal., was filed in the General Land Office September 2, 1871. No point of the line between said points has been definitely located, and no evidence of construction furnished.

Maps of completed sections of road in the State of Texas have been filed with affidavits of the chief engineer, covering part of the line.

For the main line from the—

Louisiana State Line to Dallas	169.12 miles, February 11, 1874.
Dallas to Fort Worth	31.87 miles, January 1, 1877.

The main line has been completed to a junction with Galveston, Harrisburgh, and San Antonio Railway at Sierra Blanca, but no evidence of construction beyond Fort Worth has been furnished the Land Office.

By an act of Congress of May 2, 1872, the name of this company was changed to the Texas and Pacific Railway Company. (17 Stat., 59.)

Prior to the above the company was consolidated with the Southern Pacific Railroad Company (of Texas), March 21, 1872, and with the Southern Transcontinental Railway, March 30, 1872.

The annual report of the president of the company for the year ending May 31, 1875, gives the following:

Gross earnings	$1,183,313 33
Operating expenses	789,803 85
Net earnings	393,509 48
Passengers carried	58,059
Revenue	$239,037 02
Pounds of freight carried	176,690,000
Revenue	$479,997 81
Locomotive engines	29
Passenger cars	18
Baggage, mail, and express	7
Freight cars	350
Stock cars	67
Average number of miles road operated	320.22

On August 11, 1876, the company had in operation the following number of miles of road:

Shreveport, La., to Fort Worth, Tex	221
Texarkana to Sherman	154
Marshall to Texarkana Junction	69
Total	444

Below are given figures taken from the annual reports of the company; the year ends May 31:

Earnings.	1876.	1878.	1880.
Passenger	$397,426 82	$592,694 12	$456,054 82
Freight	1,113,043 70	1,660,645 14	2,053,018 35
Express	12,342 71	24,273 83	22,270 77
Mail	30,574 90	90,979 65	41,622 36
Telegraph	8,543 41	17,437 61	10,920 31
Miscellaneous	2,693 44	5,280 00	5,335 00
Total	1,564,624 98	2,331,310 35	2,589,221 61
Operating expenses	891,882 02	1,448,439 38	1,543,517 75
Net earnings	672,742 96	882,870 97	1,045,703 86
Passengers carried	129,035	245,112	194,788
Revenue	$326,832 62	$592,694 12	$456,054 82
Tons freight carried	138,596	388,967	525,093
Revenue	$729,866 23	$1,660,645 14	$2,053,018 35
Locomotive engines	28	49	52
Passenger cars	19	32	32
Baggage, mail, and express cars	7	11	11
Freight cars	430	813	798
Stock cars	82	164	160
Average number of miles operated	325		
Total number of miles operated	333	443.86	443.86

SOUTHERN PACIFIC RAILROAD.

(Leased and operated by the Central Pacific Railroad Company.)

Line of road—San Francisco to El Paso, Tex..... 1,286 miles.

The Southern Pacific Railroad Company was chartered under the laws of California December 2, 1865, and by its charter and section 18 of the act of July 27, 1866 (14 Stat., 299), it was authorized to construct a railroad and connect with the Atlantic and Pacific near the boundary line of the State of California, and to aid in such construction it was to have similar grants of land to those of the Atlantic and Pacific. The terms of the Congressional act were accepted November 24, 1866, and acceptance filed in the Department of the Interior December 21, 1866. October 11, 1870, this company was consolidated with the San Francisco and San José, the Santa Clara and Pajaro Valley, and the California Southern Company, all of which companies were chartered by the State of California.

The object of this new corporation was to construct and operate a line of railroad from San Francisco to a point on the Colorado River, near the southeastern boundary of California, a distance of about 722 miles, with a branch from Tehachapa Pass to Colorado River at or near Fort Mojave, a distance of about 308 miles, and such other branches as the board of directors may decide to establish.

A map of the main line of road, from San Francisco to the Colorado River, was filed in the General Land Office, January 3, 1867.

CONSTRUCTION.

The report of the president of the company, dated August 12, 1873, says: "When the present company was organized there were only 80 miles of road, extending from San Francisco to Gilroy, constructed and in operation."

	Miles.
On August 12, there were	202.5
September, 1874	278
June 30, 1875	342
June 30, 1876	711.51

Made up of the following lines:

	Miles.
San Francisco to Tres Pinos	100.49
Huron, via Goshen, to west bank Colorado River	528.56
Los Angeles to Wilmington	22.06
Carnadero to Soledad	60.40

The records of the General Land Office show affidavits of construction of sections, from which the following is, as near as can be determined, the number of miles constructed during each fiscal year and reported to the Department.

	Miles.
Year ending June 30:	
1871	30.26
1872	20
1873	20
1874	70
1875	20
1876	140
1877	118.59
1878	160.03
Total	578.88

The following figures showing the number of acres of land that have been certified or patented under grants of July 27, 1866, and March 3, 1871, during each governmental fiscal year up to June 30, 1883, as taken from the records of the General Land Office:

	Act 1866, 14 Stat., 292, sec. 13.	Act 1871, 16 Stat., 573, sec. 23.
1874	5,966.33	.....
1875	394,447.09	.....
1876	285,705.07	41,178.23
1877	22,920.48	.....
1878	230,540.30	.....
1879	11,297.73	54,315.42
1880	1,720.00	.....
1881	85,313.11	5,737.85
1882	.....	3,500.85
1883	2,519.92	.....
Total	1,040,430.03	104,732.35

The tables given below are from the annual reports of the company:

	Earnings.	Expenses.	Net earnings.
October 1, 1870, to June 30, 1871	$430,097 50	$222,427 06	$207,670 44
Year ending June 30, 1872	723,856 01	376,278 11	347,577 90
Year ending June 30, 1873	1,035,311 56	458,739 14	576,572 42

TRAFFIC AND EQUIPMENT.

	1872.	1873.
Passengers carried	314,150	330,475
Tons of freight carried	120,661	182,661
Average number of miles operated	100	121.6
Locomotive engines	14	19
Passenger cars	28	27
Baggage cars	.....	6
Mail cars	.....	.....
Express cars	.....	.....
Freight cars	227	301
Stock cars	.....	15
Other cars	18	55

Earnings.	1874.	1878.	1881.
Passenger	$512,637 53	$477,924 94	$475,443 06
Freight	504,256 42	471,262 72	628,858 30
Mail	13,682 62	10,175 19	12,400 56
Express	18,111 55	17,515 79	12,822 28
Telegraph	2,400 00	3,000 00	3,000 00
Miscellaneous	111,650 22	34,007 94	25,490 58
Total	1,162,738 33	1,013,886 58	1,158,014 78
Operating expenses	463,674 34	514,542 55	587,125 26
Net earnings	699,063 99	499,344 03	570,889 52
Passengers carried	352,544	423,917	480,133
Tons of freight carried	192,567	185,402	278,350
Locomotive engines	19	28	30
Passenger cars	27	51	62
Baggage cars	6	6	11
Mail cars	Not given...	Not given...	Not given...
Express cars	do.	do.	do.
Freight cars	306	560	581
Stock cars	14	19	18
Other cars	55	87	66

During the year 1877 the bridge across the Colorado River was completed and two new corporations were organized for the purpose of forming eastern connections with this road, one under the laws of the Territory of Arizona, and the other under the laws of the Territory of New Mexico. These companies began immediately the work of construction. From Yuma, east to Casa Grande, a distance of 182 miles, was in operation by July, 1879; by August, 1880, the road was constructed to within 53 miles of the eastern boundary of Arizona, and March 18, 1881, to a junction with the the Atchison, Topeka and Santa Fé Railroad at Deming, N. Mex.

During the same year it was extended to El Paso, when the same construction force was transferred to the extension east of that point, and by December 1, 1881, the Texas and Pacific track was met at Sierra Blanca, 91 miles east of El Paso.

The line from the Colorado River through Arizona and New Mexico being built and operated under charters from the Territorial governments, accounts for no record of its construction being filed in the General Land Office.

For the same reason no report of its operations is made to the Department, but may be found partly in Poor's Manual.

The Colorado division has been completed from Mojave to the Needles, 240 miles, but no evidence of construction is on file in the Department.

NORTHERN PACIFIC RAILROAD.

LINE OF ROAD.

Lake Superior to Puget Sound and Portland, Oreg., about 2,000 miles.

Mileage of main line, August 1, 1883:

	Miles.
Duluth to Brainerd, Minn	114
Saint Paul to Brainerd	135.5
Brainerd to Helena, Mont	1,018.5
Helena to Missoula (under construction)	131
Missoula to Wallula Junction, Wash	412
Wallula Junction, to Portland, Oreg. (Oregon Railway and Navigation Company	214
Carbonado, Wash., to New Tacoma, Wash	34
New Tacoma to Kalama, Wash	105.5
Kalama to Portland (under construction)	41
Total (including Oregon Railway and Navigation Company)	2,205.5
Branch lines, total	416.1
Northern Pacific Junction, Minn., to end of track (main line)	25.5

RECAPITULATION.

Main line in operation	1,845	
Main line under construction		172
Oregon Railway and Navigation Company	214	
Branch lines in operation	362.1	
Branch lines under construction		54
Total mileage	2,207.1	226=2,647.1

(Traveler's Official Guide for August, 1883.)

The Northern Pacific Railroad Company was incorporated by an act of Congress approved July 2, 1864, entitled "An act granting lands to aid in the construction of a railroad and telegraph line from Lake Superior to Puget Sound, on the Pacific Coast, by the northern route." (13 Stat., 365.)

By this act the company was empowered to build a line of road from some point on Lake Superior, in the State of Wisconsin or Minnesota, west on a line north of the forty-fifth degree of latitude, to a point on Puget Sound with a branch to Portland, Oreg.

The conditions of said act were accepted by the company December 17, 1864, and acceptance filed in the Department of the Interior, December 30, 1864.

The first map of definite location of a part of the main line was filed in the General Land Office, November 21, 1871, "From a junction with the Lake Superior and Mississippi River Railroad in Sec. 7, T. 48 N., R. 16 W., Minnesota to the Red River of the North."

The sections of the main line completed, and the dates of the affidavits of the chief engineer of the company showing construction, as filed in the General Land Office, are as follows:

	Distance.	Date.
	Miles.	
First. From the junction with the Lake Superior and Mississippi River Railroad to the Red River of the North	228	Oct. 5, 1871.
Second. From Kalama to Tenino, Wash	65	Aug. 15, 1873.
Third. From the Red River of the North to the Missouri River in Dakota Territory	196.4	Oct. 7, 1873.
Fourth. From Tenino to Tacoma, Wash	41.1	Mar. 5, 1874.
Fifth. Missouri River to a point 100 miles west	100	July 12, 1880.
Sixth. From point last named to the Little Missouri River, in Dakota Territory	50	Sept. 3, 1880.
Seventh. From the 150th to the 225th mile west of Missouri River	75	July 20, 1881.
Eighth. From the 225th to the 250th mile west of Missouri River	25	Oct. 15, 1881.
Ninth. From Wallula Junction, Wash. to the 200th mile-post, near Eight-Mile Prairie, Idaho	200	Aug. 24, 1881.
Tenth. From the point above to the 225th mile-post	25	Nov. 16, 1881.
Eleventh. From the 250th to the 350th mile-post west of the Missouri River	100	Apr. 17, 1882.
Twelfth. From the 350th to the 375th mile-post west of the Missouri River	25	July 11, 1882.
Thirteenth. From the 375th to the 400th mile-post west of the Missouri River	25	July 24, 1882.
Fourteenth. From a point in section 1, township 48 north, range 17 west, Minnesota, to a point in section 32, township 49 north, range 13 west, in the city of Superior, Wis	25	July 24, 1882.
Fifteenth. From the 400th to the 425th mile-post west of the Missouri River	25	Aug. 10, 1882.
Sixteenth. From the 425th to the 450th mile-post west of the Missouri River	25	Aug. 25, 1882.
Seventeenth. From the 225th to the 275th mile-post east of Wallula Junction	50	Sept. 16, 1882.
Eighteenth. From the 275th to the 390th mile-post east of Wallula Junction	25	Sept. 20, 1882.
Nineteenth. From the 450th to the 500th mile-post west of the Missouri River	50	Oct. 27, 1882.
Twentieth. From the 500th to the 525th mile-post west of the Missouri River	25	Nov. 9, 1882.
Twenty-first. From the 300th to the 325th mile-post east of Wallula Junction	25	Nov. 21, 1882.
Twenty-second. From the 525th to the 550th mile-post west of the Missouri River	25	Nov. 28, 1882.
Twenty-third. From a point in the city of Bismarck, Dak., to a point on the west bank of the Missouri River in the southwest quarter of section 26, township 139 north, range 81 west of the fifth principal meridian, being the bridge across the Missouri River and the approaches thereto (connecting Nos. 3 and 5)	4,584	Nov. 28, 1882.
Twenty-fourth. From the 550th to the 600th mile-post west of the Missouri River, about one mile west of Gallatin River, Montana	50	Mar. 20, 1883.
Twenty-fifth. From the 325th to the 350th mile-post east of Wallula Junction	25	Apr. 5, 1883.
Twenty-sixth. From the 600th to the 625th mile-post west of the Missouri River	25	Apr. 21, 1883.
Twenty-seventh. From the 350th to the 375th mile-post east of Wallula Junction, or to a point on the Pend d'Oreille River near the mouth of the Jocko River	25	Apr. 27, 1883.
Twenty-eighth. From the 625th to the 650th mile-post west of the Missouri River	25	June 4, 1883.
Twenty-ninth. From the 650th to the 675th mile-post west of the Missouri River, or to a point about six miles east of Helena, Mont.	25	June 4, 1883.
Thirtieth. From the 375th to the 400th mile-post east of Wallula Junction, or to a point about two and a half miles west of the summit of the Coriacan defile, where the line of the road crosses the boundary of the Flathead Indian Reservation	25	June 4, 1883.

REPORT OF THE ADJUTANT-GENERAL.

REPORT

OF

THE ADJUTANT-GENERAL.

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,
Washington, October 30, 1883.

SIR: I have the honor to submit my annual report for the year ending September 30, 1883.

MILITIA.

In accordance with growing usage, officers of the Army were detailed during the past summer and fall to inspect State militia encampments at the following points:

Illinois.—At Springfield, by Capt. J. A. P. Hampson, Tenth United States Infantry.

Indiana.—At Indianapolis, Capt. W. L. Kellogg, Tenth United States Infantry; Capt. J. A. P. Hampson, Tenth United States Infantry; First Lieut. W. A. Kobbé, jr., Third United States Artillery; and First Lieut. C. S. Burbank, Tenth United States Infantry.

Iowa.—At Cedar Falls, by Capt. W. H. Powell, Fourth United States Infantry.

Maine.—At Augusta, by Second Lieut. J. R. Totten, Fourth United States Artillery.

Massachusetts.—At South Framingham, Hingham, and Essex, by Maj. A. C. M. Pennington, Fourth United States Artillery.

Michigan.—At Brighton, by Capts. F. E. Lacey and S. H. Lincoln, Tenth United States Infantry.

Minnesota.—At New Ulm and White Bear, by Capt. G. Lawson, Twenty-fifth United States Infantry.

New York.—At Peekskill, by Col. O. B. Willcox, Twelfth United States Infantry.

Rhode Island.—At Oakland Beach, by Capt. H. C. Cushing, Fourth United States Artillery.

The reports appended hereto of the several inspecting officers are highly interesting. The steady improvement in discipline, soldierly bearing, and knowledge is undoubtedly due to the generally excellent temper and character of the State troops, and the closer relations maturing between the regular Army and the militia—relations productive of the best results to both services.

In addition to the regular State encampments, competitive drills have been held at Nashville, Tenn.; Cleveland, Ohio; Charleston, S. C.; New Orleans, La.; and Detroit, Mich. While these drills are outside of the regular course of military instruction, they are nevertheless productive of much good, and the War Department, in the

interest of improvement, can well spare them the expense of professional judges. The reports submitted indicate, on the part of the organizations competing, thorough instruction in the manual of arms, a spirit of emulation and ambition, together with the love of their adopted profession, which is remarkable and highly creditable to both officers and men. The aim in view, however, should be enlarged. Much time and labor has been given to the acquirement of a precision which, however admirable as a spectacular exhibition, is neither required nor contemplated in the Army. Military judges, as it should be, attach unusual weight to the results of inspection, general appearance, and soldierly bearing. Besides the drill, competition should be had in camps, in cleanliness, in the kitchens and messes, in discipline and conduct on guard and outpost duty; in other words, competition should determine which are the best troops instead of the best drilled men simply.

MILITARY COLLEGES.

The tables subjoined exhibit the apportionment of details, corrected to October 1, 1883, and the data contained in the reports of the several officers performing the duties of professor of tactics and military science.

The law authorizing the detail of officers of the Army at a limited number of colleges and universities evidently contemplated that the services of the military professors would be the means of securing a number of youths well instructed in military knowledge, who when occasion required could efficiently exercise command in the militia of their respective States. A better plan could scarcely have been devised, and, carried out faithfully, will prove a powerful factor in insuring the thorough efficiency of that branch of the military service.

Section 1225 of the Revised Statutes empowers the President, upon the application of a college or university having capacity to educate at the same time not less than 150 male students, to detail an officer of the Army to act as president, superintendent, or professor thereof. In establishing the minimum number of students that could be educated at a college or university, the law no doubt contemplated that not only such institutions should have capacity for educating a certain number of youths, but that at least the minimum number prescribed be actually under instruction. This point the War Department has no means of verifying except from the reports required of the military professor; and a glance at the second table submitted shows that a minority of the colleges or universities named therein actually educate 150 students. It is earnestly recommended that, if necessary to prevent cavil, the law be amended so as to require applications for the detail of a military professor to be accompanied by satisfactory proof that at least 150 male pupils above the age of fifteen are actually present at the institution.

The colleges and universities at which officers of the Army may be detailed should be designated by the governor of the State in which located, as being most interested in the progress of the State and its institutions, and possessing greater means of information necessary to wisely determine the question of selection.

The section of the statutes above referred to prescribes that the officer detailed shall act as "president, superintendent, or professor." He should, therefore, be a recognized member of the faculty, with equal vote, and not simply a prefect of discipline. This is of the utmost im-

portance to secure the best results as well as to preserve the dignity of the position of the professor of tactics and military science.

Drills should not be held outside of regular hours, but considered as part of the curriculum of instruction.

Finally, I am of opinion that officers should be forbidden to instruct in any other branch of education except in so far as the instruction has direct reference to military knowledge.

Universities and colleges.	No. of students.		Total average attendance.	Average attendance.		Aptitude of pupils.	Interest manifested by faculty.
	Over 15 years of age.	Under 15 years of age.		Artillery drills.	Infantry drills.		
Maine State College, Orono	54	.....	54	.....	40	Good	Very good.
University of Vermont, Burlington	73	.....	73	15	64	Excellent	Excellent.
Massachusetts Agricultural College, Amherst	65	.....	65	28	61	Good	Marked.
Union College, Schenectady, N. Y.	.....	.....	.....	.....	.....	.....	.....
Cornell University, Ithaca, N. Y.	227	.....	227	27	185	Good	Good.
Cathedral School of St. Paul, Garden City, Long Island, N. Y.	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Military Academy, Chester.	112	19	131	.....	131	Very good	Commendable and unremitting.
Allegheny College, Meadville, Pa.	.....	.....	.....	.....	.....	.....	.....
Rutgers College, New Brunswick, N. J.	126	.....	126	.....	35	Good	Good.
Pennsylvania State College, Centre County.	.....	.....	.....	.....	.....	.....	.....
Hampton Normal and Agricultural Institute, Virginia.	310	33	343	42	170	Very good	Satisfactory.
Bingham School, Orange County, North Carolina.	.....	.....	.....	.....	.....	.....	.....
South Carolina Military Institute, Charleston.	.....	.....	.....	.....	.....	.....	.....
East Florida Seminary, Gainesville, Fla.	51	.27	78	27	48	Good	Very great.
Agricultural and Mechanical College of Mississippi, Starkville.	185	6	191	(*)	(*)	Good	Rather negative.†
Agricultural and Mechanical College of Texas, near Bryan.	229	5	234	16	.....	Good	Good.
University of the South, Sewanee, Tenn.	104	22	126	20	51	Fair	Satisfactory.
Agricultural and Mechanical College of Kentucky, Lexington.	143	20	163	.....	119	Good	Good.
Ohio State University, Columbus.	280	(*)	280	42	150	Fair	Very satisfactory.
Indiana Asbury University, Greencastle.	280	30	310	117	117	Good	Very good.
Michigan Military Academy, Orchard Lake.	78	16	94	45	64	Not good	Not good.
Southern Illinois Normal University, Carbondale, Ill.	64	.....	64	17	58	Very good	Not good.
Illinois Industrial University, Champaign.	214	.....	214	65	70	Good	Very satisfactory.
University of Wisconsin, Madison.	.....	.....	.....	.....	.....	.....	.....
University of Missouri, Columbia	400	25	425	14	31	Good	Fair.
Kansas State Agricultural College, Manhattan.	117	2	119	.....	20	Good	Good.
Iowa State University, Iowa City	151	.....	151	22	102	Average	Very indifferent.
Cornell College, Mount Vernon, Iowa.	.....	.....	.....	.....	.....	.....	.....
University of California, Berkeley	.....	.....	.....	.....	.....	.....	.....

* Not stated.

† Great interest shown and much assistance given in military discipline; found essential to control of pupils.

Table showing apportionment of details at colleges, universities, &c., under section 1225, Revised Statutes.

States and groups.	Aggregate population of States and groups.	No. of officers to which entitled.	No. on duty in State or group.	Officers detailed.	Colleges, &c., at which detailed.	Expiration of detail.
Maine	648,945			Second Lieut. Edgar W. Howe, Seventeenth Infantry	Maine State College, Orono	July 1, 1885.
New Hampshire	346,984					
Vermont	332,286			First Lieut. H. E. Tutherly, First Cavalry	University of Vermont, Burlington	July 1, 1884.
Massachusetts	1,783,012			Second Lieut. V. H. Bridgman, Second Artillery	Massachusetts Agricultural College, Amherst	July 1, 1884.
Connecticut	622,683					
Rhode Island	276,528					
	4,010,438	3	3			
New York	5,083,810	3	3	First Lieut. H. W. Hubbell, jr., First Artillery	Union College, Schenectady	July 1, 1886.
				First Lieut. W. S. Schuyler, Fifth Cavalry	Cornell University, Ithaca	July 1, 1886.
				First Lieut. C. A. L. Totten, Fourth Artillery	Cathedral School of St. Paul, Garden City, L. I.	July 1, 1886.
Pennsylvania	4,282,786			First Lieut. W. P. Duvall, Fifth Artillery	Pennsylvania Military Academy, Chester	July 1, 1884.
				First Lieut. J. W. Pullman, Eighth Cavalry	Allegheny College, Meadville, Pa	July 1, 1886.
New Jersey	1,130,983			Second Lieut. F. L. Dodds, Ninth Infantry	Rutgers College, New Brunswick, N. J	July 1, 1885.
Delaware	146,654			Second Lieut. J. A. Leyden, Fourth Infantry	Pennsylvania State College, Centre County	July 1, 1886.
Maryland	934,632					
	6,495,055	4	4			
West Virginia	618,443					
Virginia	1,512,806			Second Lieut. Geo. Le R. Brown, Eleventh Infantry	Hampton Normal and Agricultural Institute, Hampton, Va.	July 1, 1884.
North Carolina	1,400,047			Second Lieut. J. Batchelder, Twenty-fourth Infantry	Bingham School, Orange County, North Carolina	July 1, 1886.
	3,531,296	2	2			
South Carolina	995,622			Second Lieut. E. M. Weaver, jr., Second Artillery	South Carolina Military Institute, Charleston	July 1, 1886.
Georgia	1,539,048					
	2,534,670	1	1			
Florida	267,351			Second Lieut. Arthur L. Wagner, Sixth Infantry	East Florida Seminary, Gainesville, Fla	July 1, 1885.
Alabama	1,262,794					
	1,530,145	1	1			

	2,071,695	1	1			
Texas	1,592,574			First Lieut. Charles J. Crane, Twenty-fourth Infantry	Agricultural and Mechanical College of Texas, near Bryan.	July 1, 1885.
Arkansas	802,564					
	2,395,138	1	1			
Tennessee	1,542,463	1	1	Second Lieut. R. W. Dowdy, Seventeenth Infantry	University of the South, Sewanee, Tenn	July 1, 1886.
Kentucky	1,648,708	1	1	First Lieut. C. R. Tyler, Sixteenth Infantry	Agricultural and Mechanical College of Kentucky, Lexington.	July 1, 1886.
Ohio	3,198,239	2	1	First Lieut. George Ruhlen, Seventeenth Infantry	Ohio State University, Columbus	July 1, 1884.
Indiana	1,978,362	1	1	Second Lieut. J. B. Goe, Thirteenth Infantry	Indiana Asbury University, Greencastle	July 1, 1886.
Michigan	1,636,331	1	1	Second Lieut. H. A. Schroeder, Fourth Artillery	Michigan Military Academy, Orchard Lake	July 1, 1886.
Illinois	3,078,769	2	2	Second Lieut. C. G. Starr, First Infantry	S. Illinois Normal University, Carbondale	July 1, 1886.
				Second Lieut. C. McClure, Eighteenth Infantry	Illinois Industrial University, Champaign	July 1, 1886.
Wisconsin	1,315,480	1	1	Second Lieut. G. N. Chase, Fourth Infantry	University of Wisconsin, Madison	July 1, 1885.
Missouri	2,168,804			Second Lieut. John J. Haden, Eighth Infantry	University of Missouri, Columbia	July 1, 1884.
Kansas	995,966			First Lieut. Albert Todd, First Artillery	Kansas State Agricultural College, Manhattan	July 1, 1884.
Colorado	194,649					
	3,359,419	2	2			
Iowa	1,624,620			First Lieut. E. C. Knower, Third Artillery	Iowa State University, Iowa City	July 1, 1886.
Minnesota	780,806			First Lieut. S. R. Jones, Fourth Artillery	Cornell College, Mount Vernon, Iowa	July 1, 1886.
Nebraska	452,433					
	2,857,859	2	2			
California	864,686			Second Lieut. J. A. Hutton, Eighth Infantry	University of California, Berkeley	July 1, 1886.
Oregon	174,767					
Nevada	62,265					
	1,101,718	1	1			

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE, *Washington, September* 24, 1883.

RETIREMENT OF VETERAN SOLDIERS.

While the Soldiers' Home is provided for the men who have served twenty years, or have been discharged the service for disability resulting from injuries received in the line of duty, no provision is made, except by the slow process of special legislation in individual cases, for that very small but highly meritorious class of veterans who, after almost a life-time given to the service of their country, find themselves burdened with the infirmities of age, their usefulness and activity gone, and insufficient means to live upon in their declining days. I earnestly recommend that Congress be asked to enact a law authorizing the retirement of men who have faithfully and honorably served for not less than thirty-five years on the full pay of the grade held at the time of application for transfer to the retired list. The following cases so forcibly illustrate the absolute justice of such a measure that I deem further comment supererogatory:

Edward Donnelly originally joined the Army (Battery C, First U. S. Artillery) in 1843, and served through the Mexican War and through the war of the rebellion, most of the time as a non-commissioned officer. Each discharge certifies to the fact that he was an excellent soldier and a good man. Finally, after nearly forty years' service, broken down in health, he was, while a member of Battery A, Fifth Artillery, discharged on surgeon's certificate of disability, and now—a married man, with two children—receives the trifling pension of $4 per month.

Private Conrad Schroeder, Battery H, Fifth U. S. Artillery, entered the service in 1849, and is now approaching the close of his eighth enlistment. He is feeble and quite deaf, the result of long and hard service. He has a wife—an aged woman—who cannot, of course, go to the Soldiers' Home. So that, after almost a life spent in the service of his country, this aged veteran has the prospect before him of no other refuge for himself and wife than the poor-house. His disabilities being entirely incident to old age, the pension, if any, allowed him on discharge would far from suffice for his own needs, without taking those of his wife into consideration.

DISMISSAL OF OFFICERS.

Section 1229 of the Revised Statutes authorizes the President to drop from the rolls of the Army for desertion any officer who is absent *from duty* three months without leave. As officers on the retired list, though subject to the Rules and Articles of War, are not on duty within the meaning of the above section, I recommend it be amended to include that class of officers, and thus provide authority for summary action in their case whenever the President may deem it necessary.

TERM OF SERVICE.

The statistics of the Army show that nearly two-thirds of the desertions occur within the first eighteen months of the soldier's military service. The causes, real or alleged, for this crime are numerous. One of the principal ones, however, is undoubtedly the result of inaptitude for the service, consequent restlessness under its exactions and restraints and the far-off prospect of release. I beg, therefore, to recommend that section 1119 of the Revised Statutes, establishing the term of service at five years, be amended to reduce it to three; re-enlistments, as now, *to be for* five. Many men who desert for the reasons stated above

would, it is confidently expected, serve their full term if they could realize that a comparatively short time will honorably free them from their engagement.

The law of August 4, 1854 (section 1282, Revised Statutes), grants increased pay to men re-enlisting within thirty days after the expiration of term of service. To secure to the regiment the services of men identified with it, and sharing in a degree its fame and aspirations I recommend that the law be amended so as to make the increased pay depend on immediate re-enlistment in the same regiment, and grant the man re-enlisting one, two, or three months' furlough, according to the number of terms he has already served.

DISCHARGES.

The increasing number of men discharged the service on their own application, or that of their friends, seems to demand the adoption of measures that will protect the Government from loss. It is therefore recommended that all discharges by favor—unless long and faithful service on the part of the man constitute a controlling element of favorable consideration—be made conditional on the reimbursement to the Government of the expense of recruiting and transportation, or a fixed sum, say $100.

SETTLEMENT OF CLOTHING ACCOUNTS.

Section 1302, Revised Statutes, provides that the money value of all clothing overdrawn by the soldier beyond his allowance shall be charged against him every six months on the muster-roll of his company, and under the above provision the Regulations of the Army (paragraph 2081) prescribe that the settlement shall be made on the 30th of June and 31st of December of each year, without regard to date of enlistment. This mode entails either serious loss to the Government or grievous discomfort to the soldier. The allowance of clothing for the first year is a trifle over $60. The money value of the clothing issued to a recruit at a rendezvous and depot ranges from $45 to $50, and on his arrival at regimental headquarters, the issue of a uniform coat and helmet increases that amount by $11.33. Should he enlist in January or July he draws four months' full pay while deeply indebted to the Government, and if his enlistment takes place in June or December he must serve several months without receiving any pay. In following years the clothing allowance for six months is often drawn and even exceeded long before due, and this cannot be prevented, the necessities of the soldier, resulting possibly from hard service and perhaps from lack of aptitude in taking proper care of his clothing, make it imperative he should receive articles of clothing before they are due and probably in excess of the allowance.

In a statement I have had the honor to submit in support of my recommendation for a change in the mode of settling clothing accounts, it was shown that an examination of the muster-rolls of the Army for the two months ending June 30, 1881, developed the fact that the charges against deserters for clothing overdrawn amounted to $6,377.56. This sum, less the generally small amount of pay due them at the date of their desertion, was a clear loss to the Government. Assuming that each of the 3,578 men who deserted during the past year was

indebted for clothing received but unpaid in the sum of $20 (a low average under the present system), the total loss from that source exceeded $70,000.

I therefore earnestly renew my recommendation that the law be amended to require a bimonthly settlement of clothing. This change will enable company commanders to regulate and prevent indebtedness except for comparatively small amounts.

MILITARY PRISONS.

The military prison at Fort Leavenworth, Kans., has not only maintained its ground as a successful institution, under excellent administration, during the past year, but has made good progress in all its departments, and more nearly meets the expectations of the authorities than in former years. The establishment of a penal institution is comparatively a simple matter, but a prison which is intended to be also a reformatory requires much more than the confinement of offenders within certain limits and under certain restraints as a punishment for crime committed. To combine such features as will tend to advance the public interest and, at the same time, improve the condition of the prisoner, by imparting to him some beneficial knowledge which probably he would never acquire voluntarily, is a much more difficult and intricate problem. This has been and continues to be the purpose for which the military prison was originally instituted and is now maintained, and the results have satisfactorily demonstrated that, with the experience acquired and to be yet gained while the prison is being brought up to the capacity which will be required permanently, the special features mentioned can be kept up without weakening, in any degree, the effect of disciplinary measures which, rather than mere punishment, is applied to the class of offenders confined therein for grievous disregard of military law and regulations.

During the fiscal year ending June 30, 1883, the amount of work done by the prisoners at ordinary labor in building and manufactures may be seen from the following statement, taken from the report of the governor of the prison, which is herewith submitted: For the Quartermaster's Department, 39,907 days of skilled and 34,779 days of unskilled labor, for the prison 18,114 days of skilled and 46,232 days unskilled labor. The results of this labor (omitting small items which will be found in detail in the reports from the officers of the prison) may be stated as follows: One brick building, 40 by 114 feet, 3 stories high, for dormitories; one set of quarters, 16 by 16 feet, 1 story high; 35,000 pairs of boots; 30,000 pairs of shoes; 30,000 corn brooms; 4,000 barrack chairs; 335 complete sets of harness; all the doors, sashes, and frames for the new buildings, and all necessary repairs to buildings at the prison and at Fort Leavenworth; 4,500 bushels of lime burned; raising large quantities of vegetables for the use of the prison, and 4,330 pounds of broom-corn for manufacture into brooms for the Army. During the past summer nearly 160 acres of ground have been cultivated, of which about 20 acres were overflowed by the Missouri River and the crops destroyed.

The representative money value of work done for the Quartermaster's Department is $27,969.35.

The transfer of prisoners was suspended during one quarter of the year, as there were not sufficient accommodations for them with safety to health. It was supposed, when the prison was first opened, that

capacity for from 450 to 500 men would be sufficient; but this estimate has proved too low, and increased accommodations must be provided for as fast as means can be obtained. The estimates for funds for maintaining and enlarging the prison have been made with great care, and the strictest economy is observed in the expenditures. As far as possible purchases are confined to material, and its manufacture or preparation for use is done by prison labor.

Number of prisoners in the prison on June 30, 1882	453	
Received up to June 30, 1883	352	
		805
Number discharged	307	
Number transferred	2	
Number died	5	
Number escaped	24	
		338
Remaining in prison June 30, 1883		467

The general health of the prisoners has been good, and the conduct of the inmates, as a rule, satisfactory.

The officers of the prison have given their best efforts to the administration of its affairs, and to their interest and fidelity the success of the institution is due.

A deep sense of justice urges me to renew my recommendation that the governor of the prison be given the local rank of colonel, with the pay and allowances of that grade. This is demanded not only by the importance and responsibility of his position and the manifold duties devolving upon him, but as a richly merited acknowledgment of the rare abilities and great powers exhibited by him in the successful management of this institution.

The military prison was established for the confinement of soldiers convicted of serious military crimes and offenses. Its use is for the whole Army, and the highest efficiency of management can only be reached by undivided control. I beg, therefore, to recommend that the prison authorities be held directly responsible to, and under the sole control of, the War Department. Its geographical location does not affect its status as the punitive and reformatory institution for the Army at large, and, in my opinion, its administration should be free from direct or indirect departmental supervision.

GOVERNMENT HOSPITAL FOR THE INSANE.

The following is a list of persons committed to the Government Hospital for the Insane, under the orders of the honorable the Secretary of War, from October 1, 1882, to October 1, 1883:

Officers of the United States Army	1
Officers of the United States Army (retired)	1
Enlisted men of the United States Army	31
Late soldiers of the United States Army	3
Late volunteer soldiers	1
Inmates of the United States Soldiers' Home	4
Military prisoners	4
Employés of the Quartermaster's Department	1
Total	46

WORKING OF THE OFFICE.

At the date of my last report the clerical and other force of this office was as follows:

Chief clerk	1
Clerks of class 4	21
Clerks of class 3	35
Clerks of class 2	67
Clerks of class 1	354
Clerks of class $1,000	16
Messengers	5
Assistant messengers	51
Watchmen	27
Laborers	3
Total	583

With the exception that, by the law of March 3, 1883, the number of clerks of class 1 is reduced by one and the number of watchmen is reduced to twenty, its composition remains the same as above.

The transfer of the records and clerks from a large double warehouse on New York avenue, above Seventeenth street, to the fourth floor of the south wing of the new building, which, in my last report, I reported in progress, has been successfully accomplished. The amount of the labor involved will be more readily appreciated when I state it involved the transfer of nearly 47,000 record books (regimental letter and indorsement books, company clothing books, and regimental and company descriptive, order, and morning report books), representing the records, in some cases incomplete, of 2,032 military organizations.

Since that date, the rooms assigned me on the third and fourth floors of the north and east wings have enabled me to transfer the records and clerks heretofore located in the old Navy building and in houses Nos. 616, 618, and 717 Seventeenth street, and 1704 G street. This labor has been quickly and efficiently performed under the immediate supervision of Messrs. Longan and Holmes, of my office, who, in the performance of this duty, imposed on them in addition to those of their responsible positions, have exhibited rare tact and excellent judgment. The divisions transferred have been grouped, as far as possible, with direct reference to their more or less intimate connection with one another, thus greatly facilitating the work of the office and lessening the time required for its performance.

The following table exhibits the labors of the enlisted volunteer pension branch and other divisions of the office engaged in business relating to claims for pension, bounty, homestead grants, &c.:

Statement of calls from the Commissioner of Pensions, Second Auditor, &c., for full or partial histories of officers and men of the late volunteer forces in connection with claims for pension, bounty, back pay, subsistence, land claims, lost horses, &c.

	On hand Oct. 1, 1882.	Received during the year.	Total.	Finished during the year.	On hand Oct. 1, 1883.
COMMISSIONER OF PENSIONS.					
Enlisted volunteer pension branch	41,936	156,785	198,721	183,611	15,110
Colored troops division	263	11,631	11,894	10,348	1,546
Volunteer service branch (officers' claims)	475	30,272	30,747	30,277	470
Total	42,674	198,688	241,362	224,236	17,126

Statement of calls from the Commissioner of Pensions, Second Auditor, &c.—Continued.

	On hand Oct. 1, 1882.	Received during the year.	Total.	Finished during the year.	On hand Oct. 1, 1883.
SECOND AUDITOR.					
Enlisted volunteer pension branch	1,793	20,124	21,917	19,414	*2,503
Colored troops division	165	3,911	4,076	3,720	356
Volunteer service branch	56	1,449	1,505	1,317	188
Total	2,014	25,484	27,498	24,451	3,047
THIRD AUDITOR.					
Volunteer service branch	19	714	733	705	28
GENERAL LAND OFFICE.					
Enlisted volunteer pension branch	652	4,067	4,719	4,114	605
Colored troops division	4	186	190	187	3
Total	656	4,253	4,909	4,301	608
SUBSISTENCE DEPARTMENT.					
Enlisted volunteer pension branch	457	1,534	1,991	1,544	447
Colored troops division	1	35	36	35	1
Total	458	1,569	2,027	1,579	448
PAY DEPARTMENT.					
Colored troops division	1	652	653	651	2

RECAPITULATION.

Number of calls from all sources:		
On hand October 1, 1882	45,822	
Received during the year	231,360	
		277,182
Finished during the year		255,923
Remaining on hand October 1, 1883		21,259

The above is a gratifying exhibit. The calls on hand from the Pension Office, October 1, 1882, amounted to 42,674, a number which, January 1, 1883, was increased to 63,567, owing to loss of time on the part of the old clerks in instructing the new ones and the removal of the greater bulk of the records to new quarters in this building. The Pension Office calls, as will be seen from above table, have been reduced to 17,126.

This result, however, has not been obtained without great drain on other parts of the office. Fully recognizing the importance of pension work, the demands of justice that the claims of men who offered themselves to their country at its call, and of the heirs of those who sealed their devotion with their blood, should be promptly adjudicated, I have reduced the other divisions of the office to the minimum force necessary for the bare transaction of current business, necessarily leaving undone much work of positive value. By the law of March 3, 1875, Congress, in view of the urgency of the matter, authorized the employment of sixty-seven clerks "to be employed in copying the worn-out muster-rolls and records," &c. This work has been temporarily suspended, but should, and will be, resumed. The condition of these important papers has, of course, not improved since the date of the above law, and due regard alike to the interests of the Government and the men imperatively demands that these official records be not allowed to perish.

Before closing this report I desire to invite your attention to the provisions of section 4 of the act of March 3, 1883. Under it all leave of absence granted to clerks and employés which exceeds thirty days in

*One thousand five hundred of these requests are for information upon which to settle amount due the Soldiers' Home from deceased soldiers.

any one year must be *without pay*. In justice to many of the old clerks, whose fidelity to duty keeps them at their desks during the entire year, but who may, at some future time, desire an extended indulgence, I beg to recommend that the law be amended so as to make the thirty days' yearly leave cumulative, but not to exceed three months in all, so that men entitled to the indulgence by diligent daily attention to duty may be granted two or three months' leave without being subject to deprivation of pay.

It affords me sincere pleasure to state that the business of the office during the past year has been satisfactorily discharged, and to record my appreciation of the general intelligence, efficiency, and faithfulness of my clerks.

Respectfully submitted,

R. C. DRUM,
Adjutant-General.

Hon. ROBERT T. LINCOLN
Secretary of War.

REPORT ON MILITARY PRISON, FORT LEAVENWORTH, KANS.

GOVERNOR'S OFFICE,
UNITED STATES MILITARY PRISON,
Fort Leavenworth, Kans., July 30, 1883.

SIR: I have the honor to transmit herewith annual reports of the quartermaster, surgeon, and chaplain, connected with this prison, for the fiscal year ending June 30, 1883. I also inclose tabular statement of labor performed, prisoners received, discharged, &c.

During the past year improvements have been made in and near the prison as follows: One brick prison building (dormitories), 40 by 114 feet, three stories high, slate roof; quarters for hospital steward, three-room cottage, 16 by 16 feet, frame, one story; one corn-crib, 12 by 40 feet, 10 feet high; blinds on cottage quarters; new hard-pine floor, second floor, No. 1 building; earth-drying house, frame, 16 by 24 feet, one story; and addition to the governor's quarters, brick, second story, 19 by 40 feet. Labor performed by stone-masons, brick-layers, and plasterers: 375 perch of masonry on new building, 295 feet water-table, 33 feet 9 inches door-sills, 72 feet jamb-blocks; plastering two rooms in surgeon's quarters; repairing plastering in commissary sergeant's quarters and employés of the prison; erected two steps 54 feet, one step 18 feet, and two steps 30 feet; 112 feet of pipe were laid from new building to make connection with main sewer; 183 feet coping; 130 feet coping and setting on wall; 41 feet of curbing; two stones for sinks in prison yard, 25 feet; two flues in hospital steward's house, and building 18 brick piers for the same; 150 feet coping and 1,584 feet flagging for bake-room; 13 feet 8 inches stone, repairing crossings; 6 feet 8 inches surface gutter; repairing furnaces in boiler-room and tanks; also two base-blocks 11 inches square; one surface gutter, 180 feet; two stones, repairing crossing, 16 feet; six blocks for platform, 12 feet; two gate-posts, 10 feet; setting 135 feet lineal coping and 33 feet wall coping; 18 perch masonry, foundation under corn-crib; foundation under pan, lining the same with brick, and chimney, 2 perch; breaking openings into the coal-house and setting two frames.

Work in the shops progressed favorably, and during the past fiscal year there were manufactured 35,000 pairs of boots, brass screwed; 30,000 pairs of shoes, brass screwed; 30,000 corn brooms; 4,000 barrack chairs; 200 sets of chair rods; 585 extra parts for chairs, and necessary *packing* boxes for the shipment of boots and shoes, harness, &c., and

crates for packing chairs; 136 complete sets six-mule army-wagon harness; 36 single sets six-mule army-wagon harness; 36 single sets six-mule army-wagon harness (special, for depot quartermaster, Fort Leavenworth, Kans.); 127 complete sets four-mule ambulance harness; 24 sinches; 12 hospital-tent poles upright, and 6 ridge (also for depot quartermaster, Fort Leavenworth, Kans.).

Besides the above enumerated articles, all doors, sash, &c., as well as the necessary repairs to buildings, were made by prison labor.

During the year 4,500 bushels of lime were burned and used in building, repairs, and sanitary purposes.

Scrap pieces, 47,935 pounds, gained in cutting leather for boots and shoes, have been sold to the highest bidder, realizing the sum of $1,694.63, which amount has been covered into the United States Treasury on account of miscellaneous receipts.

During the past year the prison farm yielded 5,000 bushels of potatoes, 20,000 heads of cabbage, 25 bushels sweet and 2,000 bushels of field corn, 2,000 bushels of onions, 1,000 bushels of tomatoes, 1,000 bushels of turnips, 400 bushels beets, and 4,330 pounds of broom-corn, and other vegetables for table use. This year we have under cultivation abou, 156½ acres, planted as follows: 65 in potatoes, 75 in corn, 4½ in cabbage 4 in broom-corn, and about 8 acres with a variety of vegetables, such as onions, tomatoes, carrots, beets, &c. During the month of June, about 19 to 20 acres were overflowed by the rise of the Missouri River; 8 acres of potatoes, 4½ of cabbage, and about 7 of other vegetables are an entire loss to the prison.

The work performed for the Quartermaster's Department during the past fiscal year has been as follows: 39,907 days skilled labor, 34,779 days unskilled labor, making a total of 74,686 days of labor.

United States Military Prison in account with the Quartermaster's Department during fiscal year 1883 shows as follows:

July 1, 1882, balance due prison	$13,764 83	
To work for Quartermaster's Department	27,969 35	
		$41,734 1
By quartermaster's stores received	1,613 72	
By clothing, camp and garrison equipage received	3,362 62	
		4,976 34
Due prison June 30, 1883		36,757 84

Expended on account of appropriation for support of United States Military Prison for fiscal year 1882–'83:

Received regular appropriation	$74,309 05	
Received on account of deficiency	7,229 20	
		$81,538 25
Expended	81,473 35	
Turned into the Treasury	64 90	
		81,538 25

The conduct of the prisoners has, on the whole, been very good, but few refractory cases necessitating severe disciplinary measures occurring. Twenty-four prisoners escaped; five were recaptured, making a loss of nineteen.

The health of the institution, as shown by the inclosed report of the surgeon, has also been very good. The new dormitory, completed since last report, adds greatly to the comfort of the prisoners regarding their health. Five deaths among the prisoners occurred during the year, one of them the result of a severe injury from the caving in of a bank of earth; two cases were in the incubative stage of the disease of which they died when received here; also two deaths in the prison guard.

In the absence of the governor, I desire to take the opportunity to

acknowledge his sincere thanks to the department commander for his kind encouragement and substantial support which he has extended to him during the past year, and I am sure that whatever success has attended his labors here has been largely due to the aid he has given him in the performance of the duties required. It is also gratifying to acknowledge the obligations to the different officers on duty at the prison for the manifest interest they have taken in the performance of their arduous duties, their hearty co-operation, and exemplary conduct.

I am, sir, very respectfully, your obedient servant,

WM. BADGER,
Captain Sixth Infantry, Acting Governor.

The ADJUTANT-GENERAL UNITED STATES ARMY,
Washington, D. C.
(Through Headquarters Department of the Missouri.)

UNITED STATES ARMY MEDICAL DEPARTMENT,
OFFICE OF ATTENDING SURGEON UNITED STATES MILITARY PRISON,
Fort Leavenworth, Kans., July 17, 1883.

SIR: I have the honor to transmit herewith a tabular list of diseases and injuries which have prevailed at this prison during the year ending June 30, 1883. The diseases of greatest prevalence have been as follows, in the order named: 1st, catarrh of respiratory organs; 2d, intermittent fever; 3d, acute rheumatism; and 4th, acute diarrhœa.

Although the number of prisoners has been greater than ever before (attaining to the number of 554 on December 28, 1882), there has been no material increase in the sick report. Five fatal cases occurred during the year, one of them the result of a severe injury from the caving in of a bank of earth. Two cases were in the incubative stage of the disease of which they died when received here; they came from Jefferson Barracks, Missouri, and died within about a fortnight after arrival.

It has been found expedient to recommend from time to time for discharge prisoners whose condition demanded change of surroundings in order to prolong life, or those whose disabilities would render them subjects for hospital for prolonged and indefinite periods, or such as were disordered in mind and likely to become insane if held to serve out their sentences. Prisoners of these classes are being received here continually, and would prove a serious embarrassment unless disposed of in this way. The hospital is sufficiently large to meet legitimate demands, but insufficient to accommodate chronic and incurable cases to any great extent.

The sanitary and general hygienic condition of the prison has been, as in former years, satisfactory.

Very respectfully, your obedient servant,

J. P. WRIGHT,
Surgeon, United States Army.

The GOVERNOR UNITED STATES MILITARY PRISON,
Fort Leavenworth, Kans.

OFFICE OF THE ACTING ASSISTANT QUARTERMASTER,
UNITED STATES MILITARY PRISON,
Fort Leavenworth, Kans., July 27, 1883.

SIR: I have the honor to make the following report of my official duties as acting assistant quartermaster at this prison during the fiscal year 1882–'83.

I reported for duty at this prison per paragraph 4, Special Orders, No. 220, dated Headquarters of the Army, Adjutant General's Office, September 21, 1882, and per paragraph 3, Special Orders, No. 199, dated Headquarters Department of the Missouri, October 4, 1882, relieving First Lieut. F. L. Dodge, Twenty-third Infantry, per Orders, No. 37, dated Fort Leavenworth Military Prison, October 10, 1882, and remained on such duty to the end of the last fiscal year, except for twelve days from May 18, 1883, to May 30, 1883, inclusive, during which time I was on leave of absence, per Special Orders, No. 101, paragraph 2, dated Headquarters Department of the Missouri, May 16, 1883.

The old pattern Army clothing having been exhausted, except caps and overcoats, it has been necessary since the 1st of November last to manufacture clothing at the prison for the use of military prisoners. The articles manufactured include blouses, trousers, drawers, and shirts, and the work done is of a very satisfactory character. The majority of the prisoners employed as tailors have been taught their trade in the

prison shop, and the character of their work demonstrates how easily this department of the prison might be expanded and utilized for the manufacture of Army clothing.

The following articles were manufactured in the clothing department of the prison during the last fiscal year; 403 blouses, 534 pairs of trousers, 356 shirts, 593 pairs of drawers, 1,009 pairs of shoes, and 561 pairs of boots.

The following articles of old pattern were issued to prisoners; 153 overcoats, 305 blouses, 513 pairs of trousers, 2,844 pairs cotton socks, 802 pairs woolen socks, 674 forage caps, 1,247 pairs of drawers, 1,676 shirts, 30 campaign hats, 205 citizen hats, 134 uniform hats, and 250 straw hats.

There were manufactured and issued to discharged prisoners 307 suits of citizens' clothing.

There is no excess of clothing on hand nor of material beyond what is needed for manufacture and issue to prisoners.

The following articles were manufactured in the prison shops and were turned over by me to the depot quartermaster, Fort Leavenworth, Kans.: 30,000 pairs of shoes, 35,000 pairs of boots, 30,000 corn brooms, 4,000 barrack chairs, 12 hospital-tent poles (upright), 6 hospital-tent poles (ridge), 36 single set mule army-wagon harness, 127 complete set four-mule ambulance harness, 24 sinches, and the following miscellaneous parts of chairs; 200 rods, 100 arms, 100 rungs, 250 butts, 100 legs, and 35 seats, together with crates and boxes for shipment of the above-mentioned articles.

I have the honor to be, sir, very respectfully, your obedient servant,

W. P. EVANS,
Second Lieutenant, Nineteenth Infantry, A. A. Q. M.

The GOVERNOR UNITED STATEL MILITARY PRISON,
Fort Leavenworth, Kans.

UNITED STATES MILITARY PRISON,
Fort Leavenworth, Kans., June 30, 1883.

SIR: The close of this fiscal year finds the *morale* of the prison, to all appearances, at least, as good as on previous like occasions.

A mental *résumé* leads me to believe some good has been accomplished by encouraging the inmates to feel that they are not utterly forsaken, nor are they all totally depraved, and that if they will live sober, industrious lives, there is much in store for them. Not a small per centum of them return to their homes, being cured of their roving propensities; others seek employment as laborers and mechanics, while a few re-enlist, and the remainder (the dross) are swallowed up in the whirlpools of vice that are daily waiting to receive all such. A great many, seeing the folly of intemperance and the results it has and is producing, resolve to henceforth refrain, and numbers of them prove themselves able to maintain their purpose. But the vice of gambling is not so widely apparent, and not so rigidly guarded; its demoralization among these men is appalling.

One hundred and twenty volumes have just been purchased for the library, also a book-press and paper-cutter for the bindery, so we shall be able to add a number of magazines to the library (bound here during the present year). We are under obligations to the Rev. W. D. A. Mathews, of the "Soldiers and Seamen's Aid," for frequent donations of magazines and literature, as well as other parties for similar smaller donations.

A large proportion of the inmates appreciate the labor that is bestowed in the direction of their moral and intellectual welfare, and so long as it is designed to reform these men by committing them here, there cannot be any question as to the benefits of books and Sunday services.

Much of the time Sunday is devoted to music, in which all can engage, whether of any or no faith, and the talks are brief and practical; but the Government no more than a State can conduct a reformatory without some expense. We are now greatly in need of more hymn-books and books for responsive readings. I believe it possible to do many of these men good, by awakening a higher self-respect, a desire to possess a good home and pleasant surroundings, and the good old age that comes from law-abiding citizenship.

I have the honor to be, general, your most obedient servant,

JOHN B. McCLEERY,
Chaplain United States Army.

ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

Annual report of alterations in prisoners and prison labor performed at the United States Military Prison, Fort Leavenworth, Kans., during the fiscal year ending June 30, 1883.

Date.	In prison.		Gain.			Loss.								
						Discharged.			Transferred.					
	Aggregate.	Aggregate last report.	By transfer.	From escape.	Aggregate.	By expiration of sentence.	By order.	On surgeon's certificate of disability.	To post guard-house.	To insane asylum.	Died.	Escaped.	Aggregate	Sentences mitigated.
July 31, 1882	439	447	18	.....	18	19	5	4	.....	.....	.....	4	32	9
August 31, 1882	418	423	8	.....	8	21	3	3	.....	.....	.....	2	29	6
September 30, 1882	456	431	72	.....	72	25	1	2	.....	.....	1	5	34	9
October 31, 1882	471	441	34	.....	34	13	3	.....	.....	.....	.....	3	19	4
November 30, 1882	516	449	67	1	68	17	1	3	.....	1	1	.....	23	13
December 31, 1882	553	441	52	1	53	11	2	1	.....	.....	.....	2	16	6
January 31, 1883	532	454	9	1	10	24	2	2	1	.....	1	1	31	7
February 28, 1883	490	449	.....	.....	.....	29	6	6	.....	.....	1	.....	42	2
March 31, 1883	458	454	1	2	3	23	6	3	.....	.....	.....	3	35	2
April 30, 1883	476	438	41	.....	41	16	5	2	.....	.....	.....	.....	23	7
May 31, 1883	451	466	10	.....	10	18	7	5	.....	.....	1	4	35	15
June 30, 1883	467	453	35	.....	35	15	.....	4	.....	.....	.....	.....	19	1
Total	5,727	5,346	347	5	352	231	41	35	1	1	5	24	338	81

RECAPITULATION.

In prison June 30, 1882	453	
Received since	352	
		805
Discharged	307	
Transferred	3	
Died	5	
Escaped	24	
		338
Remaining in prison June 30, 1883		467

PRISON LABOR PERFORMED.

Date.	For Quartermaster's Department.			Outside prison yard, laborers, number of days.	Inside prison yard.		Manufacturing department.				Total days' labor.		Aggregate number of days' labor performed.
	At headquarters Department of the Missouri; laborers, number of days.	For depot quartermaster, mechanics, number of days.	For depot quartermaster, laborers, number of days.		Mechanics, number of days.	Laborers, number of days.	Shoe-shop, mechanics, number of days.	Harness-shop, mechanics, number of days.	Broom-shop, mechanics, number of days.	Carpenters' shop, mechanics, number of days.	Mechanics.	Laborers.	
July, 1882	405	25	1,667	1,094	958	3,059	2,306	313	422	447	4,471	6,225	10,696
August, 1882	337	27	1,328	920	1,059	3,391	2,559	395	465	520	5,025	5,976	11,001
September, 1882	332	.....	2,076	946	850	2,834	2,476	456	449	494	4,725	6,188	10,913
October, 1882	373	.....	2,993	943	866	2,910	2,478	435	440	506	4,725	7,219	11,944
November, 1882	364	.....	2,978	843	961	2,619	2,422	423	425	483	4,714	6,804	11,518
December, 1882	364	.....	4,093	999	1,041	2,856	2,398	419	425	466	4,749	8,312	13,061
January, 1883	407	.....	4,068	853	1,184	2,761	2,452	418	411	458	4,923	8,089	13,012
February, 1883	380	.....	2,325	1,058	1,145	2,781	2,403	403	389	407	4,747	6,544	11,291
March, 1883	441	.....	2,365	1,042	1,220	2,937	2,688	471	453	463	5,295	6,785	12,080
April, 1883	446	.....	2,043	938	1,149	2,780	2,486	549	422	363	4,969	6,207	11,176
May, 1883	475	.....	2,143	1,015	1,089	2,678	2,549	517	356	410	4,921	6,311	11,232
June, 1883	520	.....	1,856	1,010	1,118	2,965	2,524	428	230	457	4,757	6,351	11,108
Total	4,844	52	29,935	11,661	12,640	34,571	29,741	5,227	4,887	5,474	58,021	81,011	139,032

NOTE.—Average number of prisoners employed daily throughout the year of 308 working days:

Mechanics	188.38
Laborers	263.00
Total average	451.38

Respectfully submitted.

WM. BADGER,
Captain, Sixth Infantry, Acting Governor.

UNITED STATES MILITARY PRISON.
Fort Leavenworth, Kans., July 30, 1883.

Tabular list of wounds, diseases, &c., at the United States Military Prison

Diseases.	July, 1882.			August, 1882.			September, 1882.			October, 1882.			November, 1882.		
	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.
Typhoid fever															
Intermittent fever	1	7			10		4	4		4	4		1	3	
Acute diarrhœa	1	9					1	6	1		2			3	
Chronic dysentery								1							
Erysipelas															
Tonsilitis		1												5	
Primary syphilis											1				
Constitutional syphilis		1		1				4			1	1			
Gonorrhœa		1											1		
Stricture of urethra		1													
Inebriation	1													1	
Acute rheumatism		4			3			5					2	6	
Chronic rheumatism		2			1										
Anæmia															
Cancer															
Consumption											1				
Scrofula															
Epilepsy		1	1											1	1
Headache	1	12			3				1		1			4	
Insanity					1										
Inflammation of the spinal cord															
Neuralgia		5			3					3	3			1	
Paralysis															
Tetanus								1							
Conjunctivitis				1							1				
Amaurosis		1													
Inflammation of internal ear		1					1								
Earache															
Varicose veins														1	
Catarrh		1									8	1	1	7	1
Acute bronchitis								1							
Inflammation of lungs															
Inflammation of pleura	1													1	
Colic		8			1										
Constipation		6			3		1	1		2	3		1		
Cholera morbus		1													
Dyspepsia					1						2			1	
Inflammation of the bowels															
Fistula in ano															
Piles		1													
Inguinal hernia															
Jaundice								1							
Bright's disease															
Incontinence of urine											1			1	
Retention of urine											1				
Inflammation of testicles (n. g.)											1				
Inflammation of joints															
Abscess														2	
Boils		1											1	3	
Ulcers		1						2	1						
Whitlow															
Contusions		1						1			1			2	
Sprains	1	1													
Frost bite															
Simple fracture (n. g.)															
Gunshot wounds		1													
Incised wounds		1									2	1			
Lacerated wounds								1						1	
Poisoning		1													
Vaccination															
Corns															
Exophthalmic goitre			1												
Toothache											2				
Rheumatic arthritis													1		
General debility															

Hospital, Fort Leavenworth, Kans., for the year ending June 30, 1883.

December, 1882.			January, 1883.			February, 1883.			March, 1883.			April, 1883.			May, 1883.			June, 1883.			Total.
Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	
				1																	1
1	9		2	11		2	9			2			3			3			3		33
	1			3			12			1			3		1	6			9		59
																					1
				1			2														3
2	11			16		1	3			3	1	1	1			4			4		53
									1												2
				1			3			3							1				16
1																					3
	1															1					3
												1									3
1	4		1	8		1	4	1	1	8			8			4			6	1	68
				4						1			1	1		1			1		12
																1					1
															1						1
				2				1				1							1		6
										1											1
							1												1		6
1	5		1	8			10	2		5		1	2			5			3		65
																1		1	2	1	6
	1																				1
				19		2	3	2		3			1		1	4			5		55
													1						1		2
																					1
										1			1						3		7
																					1
																					2
				1																	1
																					1
1	32			20			8	1		5			3	1		8			2		100
							1	1		3		1	2						1		10
	2						1														3
	1																	1			4
1	3			7			5			4			3		1				3		36
1	1			5			5	1		4		1	4			6			3		48
																					1
				2			1			2			2			1			4		16
			1																		1
1																			1		2
																			3		4
										1											1
																					1
							1														1
										2											4
																					1
1				2				1													5
	1																				1
						1			1										1		5
	4			1			3			2			1			1					17
				1			1									1					7
			1	1												1			1		4
1				1			4		1	1						3					16
				1																	3
		2			1																3
																1					1
1										1											3
										1						1					6
				1				2		1						1					7
																					1
																22			22	4	48
																		1	1		2
																					1
																					2
								1													2
							1														1

Tabular list of wounds, diseases, &c., at the United States Military Prison

Diseases.	July, 1882.			August, 1882.			September, 1882.			October, 1882.			November, 1882.		
	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.
Emphysema	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
Pott's disease of the spine	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....
Chronic ozena	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Addison's disease	....	....	....	....	..	....	....	....	....	....	....	....	....	....	....
Psoriasis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Iptic neuritis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rotheln	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Number taken sick	6	70	2	2	26	....	7	28	3	9	36	3	8	43	2
Total number taken sick ea. month.	78			28			38			48			53		

RECAPITULATION.

Average monthly strength:	
Provost guard	93
White prisoners	427
Colored prisoners	46
Taken sick during the year. Number of cases:	
Provost guard	75
White prisoners	728
Colored prisoners	36
Returned to duty during the year:	
Provost guard	69
White prisoners	670
Colored prisoners	30
Discharged for disability:	
Provost guard	2
White prisoners	30
Colored prisoners	5
Transferred:	
Provost guard	
White prisoners	2
Colored prisoners	

Hospital, Fort Leavenworth, Kans., for the year ending June 30, 1883—Continued.

December, 1882.			January, 1883.			February, 1883.			March, 1883.			April, 1883.			May, 1883.			June, 1883.			Total.
Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	Provost guard.	White prisoners.	Colored prisoners.	
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13	77	2	6	117	1	7	78	13	4	55	1	6	38	2	4	79	1	3	81	6	839
92			124			98			60			46			84			90			839

RECAPITULATION—Continued.

Deserted:
- Provost guard .....
- White prisoners .....
- Colored prisoners .....

Died:
- Provost guard 3
- White prisoners 4
- Colored prisoners 1

Remaining on sick report June 30, 1883:
- Provost guard 1
- White prisoners 22
- Colored prisoners .....

Remaining on sick report June 30, 1882:
- Provost guard 4
- White prisoners 16
- Colored prisoners 2

Total to be accounted for:
- Provost guard 79
- White prisoners 744
- Colored prisoners 38

J. P. WRIGHT,
Surgeon, U. S. Army, Attending Surgeon.

APPENDIX.

MILITIA REPORTS.

MADISON BARRACKS,
Sackett's Harbor, N. Y., July 23, 1883.

GENERAL: In compliance with orders from department headquarters, and your letter of instructions therewith, I have visited the camp of instruction of the National Guard of New York at Peekskill, and now have the honor to submit the report required.

I first arrived at the encampment on the 27th of June. Found the headquarters staff of the State located in tents for the season, and the Seventh Regiment, National Guard of New York, for one week. The orders for the encampment and detail of regiments and separate companies were issued from general headquarters of the State in May last. It comprises one-third the organized and equipped troops in the State, last year somewhat less, leaving for next year—third season—the remainder.

The site of the camp is on the Hudson, above Peekskill, and 120 feet over the level of the river. The ground is leased, but the military authorities intend to recommend its purchase by the State, in order to enlarge the drill and camp grounds, and to make some permanent improvements, which, when made, will render the site one of the best for its object in the world.

I entered the camp at the guard-tents, and soon found all the regular routine of camp duties in fair and full operation. The tents are pitched for the season. Meals are furnished, so that the troops lose no time. Wall-tents are used with platforms, and the officers and men are at once furnished with bedsteads, blankets, mattresses, wash-bowls, and tin cups, all of which are turned in again at the end of the week to an ordnance officer and reissued to the next command. The cost of meals is $1 per day per man. The officers and men are paid a per diem of pay for every day in camp. Water is brought in pipes to the head of every company street. Cooking is done by steam from the engine and boilers by which the water is pumped. Meats, milk, and vegetables are kept cool in an ice-house, the lower story of which is clear and permeated with the air which circulates around the ice above. The sinks are situated beyond a little wooded knoll, the contents being removed and the tubs cleaned at night and disinfected, being emptied into pits half a mile from camp, and such night-soil covered with fresh earth.

A staff officer, viz., the chief of ordnance and acting quartermaster and commissary general, Daniel D. Wylie, supervises these details and others, which in some respects serve as models of economy, efficiency, comfort, and health. His work is all done by civilians' labor and a detachment of ordnance men. Immediately after reveille each officer and man is furnished with a cup of hot coffee and a ration of bread, and the work of the day begins, viz, police of camp, squad drill, and target practice. The camp is under command of the regimental commander of the troops for the time being, but his labors are greatly lessened by the presence of an assistant adjutant-general, Col. Frederick Phisterer, an experienced and accomplished ex-officer of the Army, acting as post adjutant for the encampment. On the first morning after a regiment, sometimes with additional companies of the National Guard, arrives, Colonel Phisterer instructs each first sergeant in the proper method of making out the daily reports, each organization being supplied with a report book, practically the same as that used in the regular Army. This instruction is given in the presence of the adjutant of the regiment. All the usual reports are therefore made out, consolidated, and rendered to the post adjutant, by whom they are corrected. Special daily sanitary reports are also made to the surgeon-general of the State, Surgeon Joseph D. Bryant, who is constantly present in charge of the sanitary department, embracing the whole camp; and such has been his admirable regulations and the attention of the various regimental surgeons, that up to the time I left no serious case of illness had occurred.

At noon before the day a regiment leaves the pay-rolls are corrected from the morning reports for presentation to the paymaster-general, and on the last day the post ad-

jutant prepares a consolidated ration return for the regimental commander to sign, which serves as a voucher for the caterer to be paid by the acting commissary-general. The post adjutant also instructs each adjutant and company commander and senior officer of the guard concerning the necessary books and reports for field service, correcting errors, and quietly giving instructions from the regulations, tactics, and customs of the service on questions of drills, ceremonies, and camp duties.

The pay-rolls are made in triplicate on a convenient form, different from the Army muster and pay-roll, giving the exact number of days each man serves, which is certified by the regimental and mustering officer, and payment made in checks to the order of each officer and man entitled to pay.

The organization of the National Guard of New York comprises four divisions of two brigades each—five foot batteries of three-inch ordnance guns, four guns to the battery; two Gatling batteries, two guns each; and a few mounted howitzers—aggregate strength, 12,500; all armed, uniformed, and equipped by the State, and some few organizations equipped and clothed by the new State service uniform adopted within the past year. Under the old code (repealed last winter) organizations were allowed a sufficient sum to furnish uniforms and keep them in good condition, and were permitted to select their own color and style, when approved by the commander-in chief. Some organizations contributed, themselves, in order to have a more expensive uniform. At the last session of the legislature a prescribed uniform was adopted, which will be provided from time to time as the present uniforms wear out and become unserviceable. Yet the State National Guard uniform and equipments are constantly growing in popularity, and it is thought will ultimately prevail.

The total number of muskets issued and remaining on hand is 25,000, Remington rifle, caliber .50. Those I saw were in perfect order for immediate service. The ammunition seems to be amply supplied, both for target practice and field service. No powder is considered serviceable after two years on hand. The orders and regulations for target practice for this encampment are embraced in General Orders No. 10, and the practice is superintended by General Charles F. Robbins, general inspector of rifle practice, personally, with Colonels Bodine, Gilbreath, and David, one or more of them constantly on the ground. Each regiment also has its inspector of rifle practice as a distinct regimental staff officer, with detailed markers and scorers, all of whom seem necessary to facilitate the work so as to carry the regiments through in the very limited time allowed for practice. The regimental organization also embraces two general guides on the battalion staff and two color bearers, all sergeants, with appropriate chevrons; also a regimental commissary, two surgeons, and a chaplain; and each company has its quartermaster sergeant. In other respects the organizaiion of the National Guard in this State is similar to that of regular regiments.

On June 28th I attended all the military exercises of the day, which, in such a regiment as the well-known Seventh, I need not say were carried out in a military manner, and with such intelligent rank and file the instruction was rapid. Col. Emmons Clark commands the regiment. Guards were mounted twice in the twenty-four hours, in order to allow at least one hour of such duty to each officer and man. The target practice, beginning soon after reveille and ending just before parade, had to be pushed in the same manner and for the same reason. There were also squad, company, and battalion drills in fatigue, and the full-dress parade and guard mountings. And, what struck me as most unusual in militia camps, police work was most thorough and complete. Both officers and men seemed actuated by a zeal for learning the right way to do everything, and for doing it right, not from compulsion but from *esprit de corps*. How far this answers in lieu of regular discipline depends somewhat upon circumstances, but it certainly expedites instruction. The exercises of the troops of the Seventh correspond with their intelligence and zeal. The marching was elastic, the manual uniformly good, and the evolutions fair for the amount of outdoors battalion drill, which is ordinarily two nights in a week for a few nights in April. This is preceded and supplemented, however, by company and skeleton battalion drills, more frequent, in their armory.

The term of service in this highly social and popular regiment is five years, unless sooner discharged. I saw one gentleman who had served thirty-four and another thirty-eight years in the regiment. The ranks are easily filled. The discipline is moderate, for unless the members comply with the rules and orders they may be summarily expelled, on reports and recommendations made by "committees on delinquencies;" but the law authorizes fines, and even imprisonment in jail, for continuous absence and other grave violation of the military code.

There are other instances of work by committee, with reference to uniforms, finances, and civil business, similar to that in club organizations. There is no distinction of rank in meetings for civil business. The company officers and non-commissioned officers of the Seventh are elected by their companies, the field officers by those of the line. The aggregate number of officers and men in the regiment, as shown by the last return, is 938; the number present at reveille was 757; and the number mustered two days later was 795. As the maximum strength allowed per company is 103 it

will be seen that the regiment is nearly full. Some of the companies have always candidates awaiting vacancies for admission. All drill at their armory in New York City between October and April, once a week or oftener, always at night. There are 15 regimental, 1 battalion, and 34 company armories in the State.

The Seventh Regiment armory is a model of elegance as well as usefulness. The drill hall is 300 feet by 200. Each company has, besides, its own assembly room. There are six squad rooms, regimental and veteran rooms, library and memorial hall, offices for commissioned and non-commissioned staff, a fine target range, and a kitchen with engine, boilers, and cooking ranges for use in case of need.

In company with a veteran officer of the war, who served on my own staff, I visited the armory in the city, and every room in this "palatial" establishment was thrown open to our view by Doctor Lucknow, who is a quartermaster sergeant in the regiment. For the purposes of this report I will only mention particularly the target range. We were first shown the armory or workshops where the rifles are repaired and the sights kept in order, and the shells filled and reloaded, with many times the usual rapidity, by ingenious apparatus, mostly the invention of the armorer, Mr. Edwards. Here are actually manufactured all but the shells, the powder, and the caps. I noticed that Mr. Edwards uses sawdust for wadding; Colonel Bodine recomends water-proof paper.

I next visited the firing points of the range. The men fire through port-holes and communicate by telephone with the targets for markers and scorers' use. At 50 feet are another set of port-holes, framed with mantelets of thick boiler-iron, which catch every stray bullet, so that nothing passes to the butts that does not actually hit the targets somewhere. The misses are therefore scored without delay from the firing point, and nothing but hits reported back from the butts. The whole range is under ground, and lit by gas or electricity. This range is used for full charges at 100 yards and for reduced charges beyond, through the winter and early spring; at other periods the marksmen practice at Creedmore, where all the other New York City and Brooklyn regiments have to catch all their practice as they can, from beginning to end, for want of their own ranges. The prominence of the Seventh, therefore, in rifle practice will not be wondered at. Looking along the ranks I found more than every other man wearing marksmen's badges; there were 84 in one company (Captain Shets), and over 500 qualified marksmen in the regiment for the year 1882. But it is necessary to state that the men do not qualify at 600 yards as they do in the Army, 500 yards being their limit for qualification.

At the Peekskill range there are 7 targets, affording practice for 120 men each day. The targets are double, and work up and down like window-sashes.

On June 30 the Seventh Regiment was relieved by the Thirteenth, Colonel Austen commanding. The latter landed at Roa Hook and sent forward signal men, who quickly established communication by flag between their colonel and the camp, and arrangements were made at once for relieving guard, &c., so that there was no delay. This regiment, the Thirteenth, besides its signal corps, has a howitzer battery, dragged however, by the men. The usual camp duties were entered upon with apparent zeal; dress parade, with the ceremony of escorting colors from the colonel's tent, was followed by guard mount in the evening. The regiment is from Brooklyn, and its Colonel is considered one of the strictest disciplinarians and most accomplished colonels in the State. There was not quite so much intelligence and *esprit* apparent in the ranks. I judge more from the indifferent manner in which sentinels walked their posts than from the drill, in which all evinced due interest, and strove for improvement in the tactics.

It will be seen from General Orders Nos. 8 and 10, issued before they came into camp, how carefully this regiment was informed of what they had to do. In Orders No. 10 the lessons and duties for each day are prescribed.

Their muster-roll showed an aggregate strength of 577, of whom 465 were present. They were most carefully mustered and inspected by the inspector-general, Philip H. Briggs, after which their camp was gone through by the same indefatigable officer with the greatest minuteness with reference to cleanliness and order in the arrangement of bedding, clothing, and equipments. A number of general, division, and brigade officers were present.

On the 19th of July, I made a second visit to the camp, in obedience to orders from General Hancock, and at the special request of the able adjutant-general of the State, General John G. Farnsworth.

It seems that the presence of an Army officer in camp is regarded as a recognition of the standing and importance of the National Guard on the part of the War Department and the country now and for the future. All seem anxious to bring the two branches of the service, so to speak, into closer relations. I was treated with the greatest possible courtesy and hospitality by all of the staff. I came in company with the adjutant-general and Governor Cleveland, who was received handsomely by the Ninth Regiment, now in camp, Colonel Seward commanding, and the Sixth Separate Company (the Troy Citizens Corps), Captain Cusick commanding, the Guard, and

the staff, with all the honors due to the commander-in-chief, emphasized still more by a marching review and dress parade. The latter contained some additions of ceremony not laid down in the tactics.

I staid over in camp next day in order to witness everything that was done. Simultaneously with police call, after revielle, came the first detail for the target range, composed of two companies of the Ninth, with their own officers, the regimental inspector of rifle practice, and Colonels Gilbreath and David. The work was volley firing in ranks at 100 yards, and skirmish fire at from 50 to 300 yards, measurably well done and carefully superintended. There is much coaching of the marksmen, and some of them learn rapidly, but with it is more or less excitement of voice and manners, which is bad. The calmness of habitual command is especially needed when troops are firing.

After guard mount came company and battalion drill. It would be invidious to criticise where the drill is for instruction of officers and men, and where the scholars are only learning their lessons; but while several companies of the Ninth, all more or less filled up with recruits, showed skill in their instruction, rapid progress, and steady marching, particularly Captain Walton's company, I found the Troy company (Sixth Separate) complete, precise, and well drilled in the school of the company. Consequently, this corps, chivalrously allowed by Colonel Seward the post of honor in the battalion, viz., at the right and left flank, appeared to great advantage, and set off the line handsomely. The opportunity afforded by this encampment for instruction of the solitary companies in the school of the battalion is too important to be overlooked.

As the National Guard has supplanted the old militia, it may be regarded as the first army reserve to be called out in case of war, and steps should be taken to increase, strengthen, and improve it for both State and national purposes.

What are 12,000 soldiers, partially equipped, little drilled, and kept up by voluntary rules of discipline, to a population in its own State of 5,000,000 of people?

The question of improving, increasing, and utilizing the National Guard as a national reserve, or sort of Landwehr, is one of great nicety, and calls for discussion by our military thinkers and writers. The National Guard of the Empire State of New York goes into camp one week in two years, the Landwehr in Germany eight weeks every year.

Very respectfully, general, your obedient servant,

O. B. WILLCOX,
Colonel, and Brevet Major-General.

The ADJUTANT-GENERAL OF THE ARMY,
Washington, D. C.
(Through Headquarters Department of the East.)

FORT TRUMBULL, CONN., *July* 25, 1883.

GENERAL: Having, in compliance with Special Orders, No. 110, current series headquarters department of the East, visited and inspected the encampment of the Rhode Island militia at Oakland Beach, R. I., I have the honor to report, for the information of the honorable Secretary of War, the conclusions I have arrived at through said inspection, both as to the present military condition of the troops there assembled and as to what seems requisite to further increase their efficiency, in view of any call upon them for active service.

On Monday, the 9th instant, I accompanied the brigade commander to the camp-ground to witness the manner in which the business preliminary to the arrival of the troops was conducted in the matter of the disembarkation of material, its distribution among the various camps, and the pitching of the tents, &c.

On the 10th, I witnessed the arrival of the main body, the mounting and posting of the first guards, and the settling down to camp life. In the afternoon I thoroughly inspected the First and Fourth Battalions of Infantry and their respective camps.

On the 11th, I inspected the Second Battalion of Infantry and Light Battery, and in the afternoon I accompanied Adjutant-General Elisha Dyer, jr., in his review of the brigade.

On the 12th, I accompanied the brigade commander and witnessed the maneuvers of the whole force in a general field day, during which the brigade was exercised in skirmishing, deploying, firing, the posting and relieving of pickets, reconnoitering, and other movements. This consumed the whole day, and was especially valuable as instruction, as well as exceedingly interesting as a spectacle.

On the 13th, I inspected the Fifth Battalion, and accompanied his excellency Governor Bourn, at the review given to him.

On Saturday, the 14th, I witnessed the breaking up of camp, and the street parade in Providence, R. I., which terminated the work of the week.

At various times during the week I witnessed company battalion, and brigade drills, the workings of the signal corps, the daily guard mountings and evening parades, visited the various camps, inspected the messes and the methods of carrying on the routine of camp. I inspected the books and papers of the brigade headquarters, the arrangements of the medical department, and generally everything which was to be seen.

Without entering into details personal to any organization, I have to report in general terms as follows:

This brigade—a consolidated report of which is herewith appended—is organized as nearly as possible on the method of the regular establishment. The aim seems to be to secure in its organization, equipment, and instruction a body of troops which shall be immediately available for service at the call of the State or General Government. To attain this end, therefore, the regulations of the Army are carried out as nearly as practicable in a body of citizen soldiers. The uniforms and equipments are, with some immaterial differences, the same as those of the Army, and the tactical instruction is mainly in such exercises and movements as have practical application in war. Such being the case, it appears to me that this force could be readily and quickly placed in the field, and having a thoroughly complete organization and a competent staff, very little trouble would be experienced in increasing its strength to the maximum, and incorporating it as a whole in any army it would be necessary to raise. As far as my observation went, it is of excellent material, the officers being enthusiastic and competent, and the men intelligent, and, as a rule, well instructed. While, of course, there are some who are not as robust as the others, the physique of the whole force is good, and the men seemed able to undergo the ordinary hardships of service. There was no sickness of any moment during the whole encampment.

This brigade is fortunate in having in General Elisha H. Rhodes, its commander, an officer who combines the judgment which results from experience in war with a zeal which is governed by a just appreciation of the differences between regular and citizen soldiers. Generally speaking, there is in national guard organizations too little attention given to the practical duties of a military life, or, going to the other extreme, a too strenuous attempt is made to convert the militia man into a regular. In the latter case, the inexperienced are disgusted by a rigidity of discipline which they do not understand, and are driven from a service which, in its very nature, is opposed to a regular army. On the other hand, a too great attention to purely ceremonial exercises and the measuring of the efficiency of a force by its proficiency in parades and reviews tends to keep out of the militia many who are thus led to regard it simply as a body of holiday soldiers, and its encampments as a waste of time.

General Rhodes seems to have struck the happy mean, for while he has brought his brigade to a very creditable condition as regards its performance of ceremonies, it is equally well versed in the more prosaic duties of a soldier. In the accomplishment of this he has been assisted by an excellent staff, and is re-enforced by his subordinate commander. The discipline of the force was excellent. While this in a great measure resulted from the character of the men themselves, it was easy to see that it was not simply the consequence of a reliance on that alone, but followed from the strict attention of the officers to their duties and to the regulations governing the camp. Visiting the various camps at all hours, I never observed any disorder nor any willful infraction of the orders in force. I must, however, call attention to the fact that I rarely saw a soldier salute his officer; but this was evidently more the result of ignorance than intention. It would be well if this point were more insisted on in the future, not only on account of its propriety, but also for the influence it has on the general discipline of a command.

I was particularly struck with the way in which the regular routine of camp duty went on. The police of the camp was excellent and systematically done. I was careful to extend my observation in this particular to the out-of-the-way places and at irregular times, and invariably found not only the main streets but the purlieus of the camp in thorough police. The condition of the tents and other camp equipage was excellent. I am informed that they have been now in use for several years. I did not observe any defacing marks on any. There was no established method of arranging the tents for inspection of quarters, and it was different not only in the different battalions, but also in the different companies of the same battalion. This should be remedied, for, while it seems comparatively unimportant how a tent is arranged, provided it is orderly and clean, yet a certain prescribed system should obtain. It was from the evidence which the familiarity of the brigade in these details furnished me that I formed my opinion of its availability for sudden service. It was easy to see that the majority, officers and men, were well versed in the economy of camp life.

Guard duty was measurably well done. It is one of the most trying of all duties to a militiaman, and as he is rarely instructed in it until he goes into camp, he has to obtain his knowledge just when he wants to use it. The questionable practice of subjecting sentinels to mock inspections, by authorized parties, did not obtain here;

neither was there, as far as I am aware, any attempt to puzzle them with extraordinary questions as to what they would do under hypothetical circumstances. But it was evident that many on post had very indefinite ideas as to their duties. It seems to me that it would be well if every battalion commander would devote a certain amount of time to preparing his officers and men for this most important duty. It could readily be done by mounting a guard and posting and instructing sentinels in the armory during the winter, and such an exercise would be of more practical use than the acquisition of a perfect manual of arms. Too much time is devoted to that and in acquiring a painful precision in marching. The real effort should be expended in preparation for the emergencies for which the militia is primarily organized, and neither in riot nor in actual war is there ever any pressing need for an ideal alignment, or that every musket should move as one. But there is a most decided necessity that the soldier should thoroughly understand the duties of a sentinel, and comprehend the extreme honor and importance of his position as such.

Another most important item of a soldier's education is apparently ignored, and that is the personal care of his arms and equipments. I am fully aware that it would be impracticable to require the men to habitually take care of them, but they should at least be instructed how to do it, so that when they go into active service they can know how. All should know how to dismount and reassemble their arms, and how to keep them in order, and in camp they should be required so to do. This is not only absolutely essential to the efficiency of the soldier personally, but it should be made obligatory on all who are intrusted with the care of valuable arms and equipments in the interest of the State which has to supply them. It is not at all improbable that if this encampment had been marked by rainy weather, that many guns would have been in a measure unserviceable. As it was, one rainy night afforded, by the rusty guns which it produced, an example of the absurdity of relying on a company armorer entirely. In this connection I would urge that the .50-caliber muskets now in the hands of this brigade be replaced by the regulation .45 caliber arm. The mere fact that it must be provided with a special ammunition, and the danger that in some future of active service such ammunition could not be replaced, is argument sufficient. This matter should be attended to at once. I found the arms in fair order, the equipments about the same. The exterior of the guns were as a rule clean, but the sights, breech, mechanism, and assembling screws were in too many instances illy cared for. The cartridge-boxes and belts were clean, but not thoroughly blackened; the brasses in some companies were clean, in others coated with verdigris. Bayonets and scabbards were generally in good order. Knapsacks, haversacks, and canteens were all in excellent condition. The uniforms were serviceable, cleanly, and as a whole well fitted to the person; the fatigue uniform was very good. The personal neatness of all was marked, the hair being closely cut. The men were steady in ranks as a rule, though I noticed in the beginning of the encampment some exceptions.

In the matter of inspection of arms and equipments, it is evident that where the soldier himself is not personally responsible for the condition thereof such a ceremony is of no practicable importance save as an exercise. In this connection I present for consideration the advisability of encamping a company or battalion of regular troops either with or, preferably, in the vicinity of a militia encampment, in order to afford the citizen soldier an opportunity of learning how professional soldiers care for their arms and equipments, perform guard duty, and carry on the daily routine of camp life. It is in these matters that the example of the regular troops would be of immediate benefit.

In the matter of drill there need be no essential difference between either service, and I have found that such is the case. In this brigade I noticed that where the men had been any reasonable time in the service they were well drilled. But the presence of quite a number of recruits destroyed the effectiveness of some of the companies. It appears that the regular term of service of the men expires in June, just before the annual encampment. The old men then re-enlist and the new ones join, and the brigade goes into camp with a considerable number of green hands. The encampment which both for purposes of instruction and display should terminate the soldier's military career, is in fact the commencement of it. Ignorant of drill and duty, he is called upon in the outset to exhibit his awkwardness before a throng of spectators. Feeling that he annoys his officers and comrades, whose efficiency he impugns and whose display he destroys, he acquires in the very beginning of his military life a disgust for it, and is only too glad to escape from it. It would seem proper, therefore, that the enlistment of new men should take place after the annual encampment, in order that none be taken to it save those who have had a year's preliminary instruction in their duties. The encampment will then be a benefit to the soldier himself and more satisfactory in its results to all.

The distinguishing characteristic of this brigade is its evenness. In most militia assemblages there are usually some two or more organizations which stand out head and shoulders above the rest. In this body there was a noticeable equality in drill, appearance, and discipline, the best evidence, in my opinion, of the proficiency of the

brigade, in that it showed that all were equally conscientious in their work. No battalion noticeably excelled the other either on review, parade, or in maneuvers, and no company in any battalion was so far superior to the others as to warrant me in specially noting it. During the field maneuvers of the 12th all were called upon to perform various evolutions. No effort was made to display one body more than another, nor to specially utilize any, save in the case of the Fourth or colored Battalion. This did all the skirmishing, and did it in an easy and workmanlike way. I am unable to say whether the selection of this particular battalion for that special service was accidental or intentional. If, however, this most important branch of tactics has been neglected in the instruction of the other organizations, it cannot be too strongly urged upon their commanders to devote more attention to it. Modern arms, and especially the conditions which govern war in this country, make skirmishing the most important item in the American soldier's tactical education. It is unnecessary to enlarge upon its prime importance. Independent of its war value, it is one of the most interesting spectacles to the visitors at a camp, for nothing affords the variety which the exhibition of a well-handled skirmish line offers.

In direct connection with skirmishing comes the subject of target practice, which was the one important military duty entirely omitted, so far as I am aware, at this encampment. It was stated that there was no opportunity to attend to it, and that even if there had been it would be impossible to achieve any satisfactory result in the short time at disposal. In my opinion, it would be preferable to omit almost any other exercise than that of target practice. It is a mere waste of time to acquire a knowledge of a variety of movements which lead to no practical result. The end of all tactics, all organization, is to bring the soldier to the firing point. If, when you get him there, he is unable to shoot his enemy, the impropriety of his military existence is obvious.

To conclude the subject of the foot troops, I believe that, with the exceptions above noted, they are very good. I noted each day a marked improvement in all they did. A month's encampment with a wise and varied military regimen would make this brigade well nigh perfect in all save war experience.

As far as the *personnel* of the cavalry and artillery is concerned, the same remarks apply. The officers and men are equally earnest and painstaking. But the efficiency of such forces is limited by the deficiency of their horses. In the case of the light battery, the drivers are simply hired for the occasion. But even if these two arms were all that it were possible to make them, we must take into consideration the purposes and probable employment of this particular body of State troops. The propriety of continuing a mounted force which forms such a large item in such a small brigade may be well doubted. As Rhode Island can never expect to maintain a larger body of militia, it would appear that it should mainly, in fact entirely, encourage such as would be of special value to it. Liable as a sea-board State to attack at all times by a maritime enemy, especially, from its situation between Massachusetts and New York, destined to be the first point for assault, it should especially foster the heavy artillery service. In event of any war, the regular artillery would be amply sufficient to supply the first need for light artillery, and its place in the sea-coasts forts must be supplied by the local militia. This seems to be good policy in regard to the militia of all the sea-board States; but Rhode Island has a more direct interest than any in the existence of heavy artillery, for it is evident that a naval enemy has the State at a disadvantage once it penetrates into Narragansett Bay. Furthermore, it might as well be understood that a mounted force is an exotic in a manufacturing, mechanical State, like Rhode Island. Our dependence for cavalry in any war must be in those States where not only the horses are raised but the people are equestrian. This is not the case in Rhode Island, and it seems folly to try to continue in existence there an arm of the service which not only is of no practical value to it, but which, from the very condition of things, is incapable of expansion. If, however, it is desired to keep up a light artillery organization, it should be one of machine guns, Gatlings, or others, for they are of use. I am aware that Rhode Island furnished during the rebellion an admirable light artillery and also cavalry regiment; but that is no argument in favor of their being a part of its militia. In any scheme of organization of her small force her wisest course is to consider the probable, and not the possible. Under these circumstances, considering what demand would first be made on her militia, it does not seem unadvisable for her to make the whole of it a heavy artillery force. In becoming heavy artillery the troops would still be drilled and equipped as infantry, while, from their knowledge of the use of sea-coast guns, they would immensely increase their effectiveness In case of any sudden war, the militia of the country will be a most important element in the immediately formed army. It will be a body of men decidedly different in all the essentials of soldiership to the militia of 1861, and therefore it seems to be good policy for the superior military authorities to exert their influence to induce State authorities to organize their forces for local needs. Let the great interior States, which are not exposed to sudden attack, provide the infantry and cavalry, and the sea-board States furnish the garrisons

for the harbor defenses; in other words, have the round pegs in the round holes and the square pegs in the square holes.

In conclusion, I wish to call attention to the admirable system with which the railroad performed its part in this encampment. There were no vexatious delays; the troops and supplies were handled rapidly and comfortably. The experience gained in this item is not the most unimportant result of this encampment.

I am under many obligations to General Rhodes and the officers of his staff for their hospitality, as well as to General Dyer, the adjutant-general, and General Dennis, quartermaster-general, for courteous attentions.

I am, general, your obedient servant,

H. C. CUSHING,
Captain Fourth Artillery, Brevet Major, United States Army, Inspector.

General R. C. DRUM,
Adjutant-General.

(Through headquarters Department of the East.)

Abstract of morning report of the Brigade Rhode Island Militia at Camp Bourn, Oakland Beach, Rhode Island, July 14, 1883.

	Present.				Absent.				Aggregate.			
	Officers.	Men.	Band.	Total.	Officers.	Men.	Band.	Total.	Officers.	Men.	Band.	Total.
Brigade commander and staff	10	.....	.....	10	1	.....	....	1	11	.....	.....	11
Band	.....	.....	27	27	.....	.....	.....	.....	.....	.....	27	27
Signal Corps	1	5	.....	6	.....	.....	....	.....	1	5	.....	6
First Battalion Infantry	23	144	.....	167	.....	43	....	43	23	187	.....	210
Second Battalion Infantry	24	188	.....	212	2	50	....	52	26	238	.....	264
Fifth Battalion Infantry	17	142	.....	159	3	22	...	25	20	164	.....	184
Fourth Battalion Infantry	11	70	....	81	1	16	...	17	12	86	.....	98
Battery A, Light Artillery	4	61	.....	65	.....	2	....	2	4	63	.....	67
First Battalion Cavalry	13	76	.....	89	.....	14	....	14	13	90	.....	103
Total	103	686	27	816	7	147	...	154	110	833	27	970

FORT WAYNE, MICH., *August* 16, 1883.

SIR: I have the honor to report that, in compliance with Special Orders, No. 130, Adjutant-General's Office, War Department, I proceeded on the 7th instant to the encampment of First Brigade of Michigan State Militia, at Island Lake, near Brighton, Michigan, reporting my arrival at Camp Griffith to Adjutant-General John Robertson and to Inspector-General F. S. Hutchinson. The camp is the same occupied last year, and is admirably adapted for the purpose.

The camp was laid out and the tents pitched under the supervision of the quartermaster-general, assisted by the regimental quartermaster, and previous to the arrival of the troops. The tents for company officers and enlisted men were similar to our wall-tent, and apparently quite as good. Nearly all of the tents were provided with good board floors, and were generally occupied by from four to six enlisted men. Officers of the field and staff generally had tents similar in style to our wall-tent, but with one width of canvas added to both its length and width. This is an excellent tent. Each company had a mess-tent about 40 feet in length by about 20 feet in width, with walls 4 feet in height. The cooking was done by hired cooks. At previous encampments an attempt to subsist the troops by contract was found to be unsatisfactory. This year the State adopted the plan of paying to each company commander the sum of 75 cents *per diem* for each man, this in lieu of all rations—this liberal allowance sufficed to feed the companies in a bountiful way, that was apparently perfectly satisfactory.

The first two days (the 7th and 8th) were devoted to target practice, under the direction of the inspector-general—a team of five men from nearly all of the companies reporting at the camp in advance of their companies for the purpose of competing for position on the Creedmoor team. The range is excellent in every respect, and the scores of the men practicing were very fair. According to the State rules, the position

of men firing at 300 yards is standing, and at 500 yards is lying with the head to the target.

On the 8th the companies began to arrive, and by early morning of the 9th they were all in camp. The 9th was devoted to battalion drill. These first drills were quite as good as could be expected of regiments whose only opportunity for battalion drill is during their annual encampment, this being the third. On the 10th and 11th, battalion and brigade drills. The improvement in battalion drill was very marked, the movements in the last drills being generally well executed. The two brigade drills were very good; these were commanded by Brig. Gen. William H. Withington, whose experience as a brigade commander during the war and for several years since enabled him to handle his brigade in a manner that would have been very creditable to a professional soldier. Each regiment had its daily guard-mounting and dress parade. These ceremonies were conducted in accordance with tactics, and a brigade dress parade was remarkably good.

On Sunday the command was inspected and mustered. In company with the inspector-general and two members of the governor's staff, I made a careful inspection of the First and Second Regiments. They are armed with Sharp's rifle musket, caliber .45; arms in serviceable condition. I found but one company commander who was satisfied with this gun. Cartridge box and belt, similar to those now used by regular infantry, serviceable, but not in so good condition as they should have been. Uniform, full dress, similar to that worn by regular infantry, except that the trousers for all enlisted men have a dark blue stripe 1½ inches wide, and the State button is worn. The material in the uniform is generally very good; the clothing is company property, and never becomes the property of the soldier; and as the men rarely ever serve long enough to wear a uniform out (the altering and fitting of the clothing is not permitted), the result is that many of the men must wear ill-fitting uniforms. Quite a large per cent. of the men present at muster had been in service but a short time, and need of drill in the manual and setting up was noticeable. The officers of these regiments are generally well qualified to perform their duty, many of them having served as officers of volunteers during the war, and all seemed desirous of perfecting their knowledge of drill, parades, and other ceremonies. After inspection of the troops I inspected the camps. These were found to be regularly laid out and well policed. The camp of the Second Regiment was remarkably neat.

On Monday, the 13th, the brigade was reviewed by his excellency Governor Begole, who arrived in camp on the 9th and remained until the end of the encampment. The governor manifested great interest in the parades, reviews, and drills that he witnessed, and was pleased to express in orders his appreciation of our inspection. Camp was broken on the morning of the 14th.

In conclusion, I have the honor to state as the result of my observations that I find that Michigan has a brigade of good reliable militia, well officered and equipped, and composed of men so intelligent that in a very short time they could be made first-class troops in every respect. The officers of the department staff, the adjutant-general, the inspector-general, the quartermaster-general, and assistant quartermastar-general are experienced and practical soldiers, who are doing all in their power to increase the efficiency of the State militia. The officers of the brigade staff are also soldiers of experience, most of them having served as officers during the war. The discipline, good order, and police of the camp was in a great measure due to their unceasing attention to duty. To General Withington, to the officers of the department and brigade staff, and to many others, I am indebted for great kindness and courtesy.

I inclose a consolidated morning report of the brigade, and an extract from the company muster-rolls, showing the strength of the companies and the station of each.

All of which is respectfully submitted.

Very respectfully, your obedient servant,

S. H. LINCOLN,
Captain, Tenth Infantry.

ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.
(Through Post Headquarters.)

Statement of the strength of the several companies of the regiments, August 12, 1883, and the station of the headquarters, companies, and name of commanding officer.

First Regiment, Col. D. H. McComus, Lansing.—Company A, Capt. C. H. Manly, Ann Arbor, 54; Company B, Capt. Martin O'Leary, Adrian, 49; Company C, Capt. A. D. Lawrence, Tecumseh, 36; Company D, Capt. Adam Ruff, Monroe, 40; Company F, Capt. L. E. Childs, Ypsilanti, 35; Company G, Capt. John Garbelein, Jackson, 57;

Company H, Capt. W. W. Staley, Lansing, 48; and Company K, Capt. A. W. Mehan, Mason, 46.

Second Regiment, Lieut. Col. J. D. Sumner, Grand Rapids (Col. Israel Smith).—Company A, Capt. F. D. Newberry, Coldwater, 63; Company B, Capt. H. W. Calkins, Grand Rapids, 47; Company C, Capt. E. M. Irish, Kalamazoo, 53; Company D, Capt. A. E. Silliman, Three Rivers, 47; Company E, Capt. B. F. Brazee, Big Rapids, 37 Company F, Capt. S. C. Mower, Grand Haven, 44; Company G, Capt. R. W. Chester, Ionia, 58; Company H, Capt. B. W. Kies, Manistee, 41; and Company I, Capt. C. H. Rose, Grand Rapids, 35.

Third Regiment, Col. C. S. Brown, Flint.—Company A, Capt. G. E. Childs, Flint, 65; Company B, Capt. F. C. Holmes, Alpena, 58; Company C, Capt. C. R. Hawley, Bay City, 54; Company D, Capt. Albert Trusk, Saginaw, 51; Company E, Capt. A. L. Button, East Saginaw, 38; Company F, Capt. S. M. Avery, Port Huron, 39; Company G, Capt. J. E. Ward, Marquette, 63; and Company H, Capt. Henry Wilkins, Calumet, 62.

First Battalion, Lieut. Col. Eugene Robinson, Detroit.—Company A, Capt. P. F. Beniteau, Detroit, 54; Company B, Capt. Patrick Shehan, Detroit, 58; Company C, Capt. Gustave Pfeffer, Detroit, 49; and Company D, Capt. Charles Dupont, Detroit, 69.

It will be noticed that the strength of the companies as given here does not correspond with the morning report. This is in consequence of a State regulation requiring the muster-rolls to be made out at least thirty days previous to the encampment. This is done to prevent the enlistment of men within thirty days of the encampment.

Abstract of morning reports of First Brigade, Michigan State Troops, at Camp Griffith, near Brighton, Mich.

AUGUST 9, 1883.

	Present.						Absent.						Present and absent.			
	For duty.			Sick.			With leave.			Without leave.						
	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Aggregate.
Brigade commander and staff	7	....	....	....	....	....	....	....	....	....	....	....	7	....	....	7
First Regiment	32	349	17	....	1	....	....	....	....	....	....	....	32	350	17	399
Second Regiment	32	375	18	....	5	....	....	6	....	....	1	....	32	387	18	437
Third Regiment	28	397	21	....	12	....	....	13	....	....	4	....	28	426	21	475
First Battalion	18	219	16	....	1	....	....	....	....	....	....	....	18	220	16	254
Total	117	1,340	72	....	19	....	....	19	....	....	5	....	117	1,383	72	1,572

AUGUST 12, 1883.

	Present.						Absent.						Present and absent.				
	For duty.			Sick.			With leave.			Without leave.							
	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Aggregate.	Aggregate last report.
Brigade commander and staff	6	....	....	....	....	....	1	....	....	....	....	....	7	....	....	7	7
First Regiment	31	361	16	1	4	....	....	12	....	....	....	....	32	377	16	425	426
Second Regiment	34	364	18	....	16	....	....	11	....	....	....	....	34	391	18	443	442
Third Regiment	28	386	21	....	9	....	....	30	....	....	4	....	28	429	21	478	478
First Battalion	19	219	16	....	....	....	....	11	....	....	1	....	19	231	16	266	256
Total	118	1,330	71	1	29	....	1	64	....	....	5	....	120	1,428	71	1,619	1,609

FORT WAYNE, MICH., *August* 16, 1883.

GENERAL: I have the honor to report the result of my observation and inspection of the Michigan State troops, at Camp Griffith, near Brighton, from the 7th to the 14th of August.

Accompanied by Capt. S. H. Lincoln, Tenth Infantry, I arrived at Camp Griffith at 1 p. m. on the 7th of August, and found Brig. Gen. John Robertson, adjutant-general; Brig. Gen. William Shakespeare, quartermaster-general; and Brigadier-General Hutchinson, inspector-general. This was known as the department staff. General W. H. Withington and staff were also on the ground. The tents for the entire brigade were pitched, under the supervision of the quartermaster-general, by hired labor. Everything was in readiness for the troops by the evening of the 7th.

The only troops on the ground on our arrival were 19 teams which reached here on the 6th to practice for a match for local prizes. We were present at target practice on the 7th. The distance was 500 yards. All the officers and men took the prone position. The results were not so good as I expected at that range; the day, however, was quite unfavorable for good shooting, a hot sun shining directly in their faces, and, in addition, there was strong and variable winds.

On the 8th we witnessed company drills of such companies as had reached camp. All the troops had reached camp on the morning of the 9th, and on that day battalion drills, dress parades, and reviews commenced, and kept up until the evening of the 10th. Commencing on the morning of the 11th, all drills, parades, and reviews were by brigade, and continued so until the close of the encampment, August 14.

The camp was situated on a beautiful lake, known as "Island Lake," distance from Detroit 43 miles. The tents were well pitched, and all were floored. Every attention was paid to insure the health and comfort of the command, a good system of police being constantly kept up. Privies for the whole command, convenient of access and properly screened, were constructed as the troops arrived, and at the suggestion of the inspectors, were disinfected three times a day with earth. Every officer paid the greatest attention to the suggestions of the inspectors regarding the health and comfort of the troops, and saw them promptly enforced.

DRILLS.

In this camp I saw my first brigade drill since 1861-'62. The battalions were well handled by their commanders, and the brigade ably handled by General Withington. There were some mistakes made by battalion and company commanders, such as loss of distance, dressing to the wrong flank, especially in close column; in fact, most of the errors were mere matters of detail that new troops rarely ever get correctly, and can only be got correctly by frequently assembling the troops in large bodies.

The *personnel* of the whole command is very good; all the general officers are veteran soldiers, and the same can be said of nearly all the staff officers. All the field officers commanding battalions served with distinction in the late war. I found, upon inquiry, that many of the best captains were also veterans of the late war.

At all parades and reviews the men were remarkably steady in the ranks. We attended every drill and parade that it was possible for us to attend, and corrected errors as they occurred.

On the evening of the 11th General Withington assembled the battalion commanders and all field officers off duty in his tent, and for about two and a half hours Captain Lincoln and myself pointed out errors we had noticed in previous drills and parades, and instructed them in their proper forms and explained several movements in battalion drill, how to draw and return swords, &c.

Commencing at 9 a. m., Captain Lincoln and myself inspected the whole command (Captain Lincoln inspected the First Battalion and Third Regiment). This division of the inspection was necessary, owing to the distance of the several battalion camps from each other.

August 13 the day's work commenced with a few brigade movements and a review for the governor of the State, all of which were admirably executed. After this the men were marched back to camp for dinner. Commencing at 3 o'clock, there was quite a spirited sham battle. It was well managed, and only one very slight accident occurred. Through the carelessness of a man in getting over a fence his piece went off and slightly burnt his face. It was impossible for anything serious to occur, owing to the good management of the officers commanding the opposing forces.

MESSING.

The State commutes the rations of each man at 75 cents per day, which amount is paid to the company commander on sworn vouchers. Each company has a good mess kit. Food for the company is purchased under the supervision of the company commander. An abundance of fresh vegetables were purchased from farmers near

the camp at reasonable rates. The food was ample in quantity, of good quality, and well cooked.

The water was obtained from Island Lake, and kept in barrels furnished by the quartermaster-general. The water appeared to be good, and was pleasant to the taste. A liberal supply of ice was furnished the troops.

As far as I could learn there was but little sickness.

In conclusion, this Michigan Brigade need not fear to take its place with the best infantry in the country. It is well organized, well drilled, and well equipped; and the conduct of the men in camp was excellent at all times. I have not seen a finer body of soldiers since the war. The work done by the staff officers, especially the quartermaster-general, with such little help, was wonderful.

Attached is a morning report, showing the strength of the different organizations.

Very respectfully, your obedient servant,

F. E. LACEY,
Captain, Tenth Infantry.

ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

Abstract of morning reports of First Brigade, Michigan State Troops, at Camp Griffith, near Brighton, Mich., August 11, 1883.

	Present.						Absent.						Present and absent.				
	For duty.			Sick.			With leave.			Without leave.							
	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Officers.	Men.	Band.	Aggregate.	Aggregate last report.
Brigade commander and staff	6	.....	....	....	....	....	1	....	....	....	....	....	7	.....	....	7	.....
First Regiment	31	355	17	....	9	....	1	15	....	....	....	....	32	377	17	426	401
Second Regiment	34	368	18	....	3	....	....	18	....	....	1	....	34	390	18	442	432
Third Regiment	27	367	21	1	24	....	....	34	....	....	4	....	28	429	21	478	477
First Battalion	16	192	16	1	3	....	2	25	....	....	1	....	19	221	16	256	256
Total	114	1,282	72	2	39	....	4	92	....	....	6	....	120	1,417	72	1,609	1,566

FORT TRUMBULL, CONN.,
August 20, 1883.

SIR: I have the honor to report that in compliance with Special Orders, Nos. 98, 121, and 142, current series, from headquarters Department of the East, I visited the encampments of the Massachusetts Volunteer Militia, as follows: First Brigade, Brig. Gen. Nat Wales, June 19 to 23; Second Brigade, Brig. Gen. B. F. Peach, jr., August 14 to 18; First Corps of Cadets, Lieut. Col. T. F. Edmunds, July 10 to 14, and Second Corps of Cadets, Lieut. Col. Edward Hobbs, August 7 to 11.

On my arrival at the camps of each of the brigades, I reported my arrival to the adjutant-general of the State, who was present throughout each camp, and to the brigadier-generals commanding, from each of whom I received a cordial welcome. Quarters, horse, and attendance were furnished me. I remained at all of the camps until the tents were struck. Every opportunity was offered me to observe the methods of the various commands. During my stay in each camp I was associated with the inspector-general of the State (who is also adjutant-general and quartermaster-general), and accompanied him in all his inspections of the regiments, except the Second, which was inspected before my arrival in camp, in his frequent rides around the encampments, and in his visits with the grand rounds to the guards.

The First Brigade is composed of the First Infantry, 12 companies, Colonel Wellington; Second Infantry, 8 companies, Colonel Bridges; Sixth Infantry, 12 companies Colonel Deeker; Light Battery B, Captain Allen, and Company F, cavalry, Captain Fletcher.

The following table exhibits the strength of the organizations June 22, the band (18 members) being included in strength of each organization:

Troops.	Present.		Absent.		Total present and absent.		Percentage of men absent.
	Officers.	Men.	Officers.	Men.	Officers.	Men.	
Brigadier-general and staff	9	.....	1	.....	10	.....	.....
Second Infantry	30	285	3	164	33	449	36.52
Sixth Infantry	45	467	2	208	47	675	30.81
First Infantry	40	506	.....	198	40	704	28.12
Battery B	5	70	.....	29	5	101	28.71
Company F	4	87	.....	9	4	98	9.18
Total	133	1,415	6	608	139	2,027	.....

The Second Brigade consists of the Ninth Infantry, 8 companies, Colonel Strachar; Fifth Infantry, 8 companies, Colonel Bancroft; Eighth Infantry, 12 companies, Colonel Ayers; Light Artillery Battalion, A and C, Major Merrill, and Cavalry Battalion, A and D, Major Young.

The following table exhibits its strength August 17:

Troops.	Present.		Absent.		Total present and absent.		Percentage of men absent.
	Officers.	Men.	Officers.	Men.	Officers.	Men.	
Brigadier-general and staff	9	8	1	.....	10	8	.....
Fifth Infantry	34	324	.....	134	34	458	29.25
Eighth Infantry	41	453	2	179	43	632	28.32
Ninth Infantry	26	325	4	112	30	437	25.62
Artillery Battalion	14	154	.....	38	14	192	19.79
Cavalry Battalion	12	138	1	30	13	168	17.85
Total	136	1,402	8	493	144	1,895	.....

Each brigade commander is ably assisted by a staff consisting of 8 officers, many of whom saw active service in the late war.

CAMP.

The camp ground is situated about a mile north of South Framingham, where several railroad lines cross, thus rendering it easily accessible from the various points in the State. The inclosure consists of 124 acres of land, a part of which is occupied by the State arsenal and its grounds, but the greater part is set aside for the use of the brigades. It is inclosed by a neat picket fence; the ground is quite level and admirably adapted for camping, being so porous that water even after heavy rains quickly disappears.

Excellent stables for the artillery and cavalry, and one for each regimental headquarters, an ample guard-house, with cells, general prison-room, and rooms for officer of the guard and the guard, and sinks for the officers of the various organizations have been erected since last year. The guard-house is located at the main entrance, for the use of the brigade guard.

Instead of tents, neat one-story frame buildings have been provided for brigade headquarters. These buildings occupy three sides of a quadrangle. Two of them are 90 feet each in length, being divided into ten rooms 9 by 15. They are opposite each other, and on the long sides of the quadrangle. One is occupied by the staff of the brigade commander, and the other is reserved for the inspector-general of the State, the assistant inspector-general, and, on the occasion of the visit of the governor for the members of his military family. The brigade commander is quartered in a similar building, containing three rooms, and with porch on three sides. The governor has his quarters in it also. Opposite this building, on the remaining side of the quadrangle, is a tasteful band-stand. In rear of the quarters of the brigade commander is

a large mess-room for use of headquarters. These buildings, as well as the guard-house and stables, are painted a uniform brown color, and with their red roofs add to the picturesqueness of the camp. It would, in my opinion, be in the interest of economy to quarter the troops in buildings of similar construction, having mess-rooms and cook-houses to correspond. These would soon pay for themselves in the savings on repairs of tents, purchase of new ones, and in other items of expense.

The camp is supplied with excellent water from twelve pumps conveniently located. These are raised above the ground level and well concreted, which prevents refuse water from entering the wells. There are no bathing facilities, but it is intended that arrangements to this end shall be perfected at an early day. The sinks for the men are pits lined with planking and inclosed by canvas stretched on posts. They can be readily cleaned. Earth was thrown in daily. Officers' sinks are small wooden structures, with an opening in rear to facilitate removal of contents. The cook-houses are the only unsightly objects about the camp. They are built of boards, temporary affairs, and unpainted. Neat buildings, uniform with the others, should be erected.

The brigades encamped on the same ground, the arrangement of tents being essentially as required by regulations; the only difference being that one camped its companies in a single row of tents while the other had two. The floors of the tents are furnished by the companies at their own expense, as are also the mattresses. The latter are of all kinds, and different in color of ticking. The State regulations recommend bed-sacks filled with straw, but there were few of this kind. The bed-sacks should be furnished by the State. They could be turned in at end of each encampment, washed, and reissued. It would be a much healthier plan, as clean straw could be used for each command.

The police of the camps was excellent but the dumping ground of some of the regiments in the Second Brigade was too near the edge of the camp, and gave an unsightly appearance to that portion of the field. I rode around the camps frequently each day, and it rarely happened that I saw so much as a piece of paper about the grounds. Military courtesy on the part of officers and enlisted men was well observed, but was more marked in the First than in the Second Brigade in the case of enlisted men. In saluting, the positions taken were not always military, and in some instances, though they were rare, pipes and cigars were not removed from the mouth.

There was a neat and well appointed hospital at each brigade headquarters, containing about six beds. Everything was scrupulously clean, and reflected credit upon the medical officers in charge. The health of the command was remarkably good, but one case being taken into the brigade hospital, and that for only part of a day, in the first brigade. The consolidated report of the First Brigade, June 22, showed but 7 sick; and that of the Second, 23 on the 17th of August. The fact that the First Brigade encamped in June, before the various kinds of melons and fruit were ripe, will probably account for the difference in the sick report of the two commands.

A complete meteorological record was kept at each brigade headquarters daily, a full supply of the necessary instruments being furnished. This record was kept in the First Brigade by the signal detachment at headquarters, and in the Second by the medical director.

In the First Brigade considerable attention was paid to signaling with flags; 6 enlisted men, detached from companies in the brigade, under command of Capt. B. F. Field, constituted the party. Messages were sent and received with facility. It is General Wales's intention to extend the instruction in this subject to about 60 enlisted men of his command.

A printed order, giving the routine of duty, was distributed to the commands, and these were strictly followed out. Good weather prevailed at all of the encampments, and military exercises were suspended for part of an afternoon only (in the Second Brigade) on account of rain.

Target practice received considerable attention in the Second Brigade, each regiment having a day at the targets. In the Frst Brigade there was some target practice on the morning of the day camp broke up. The only range at present available is one of 200 yards. At this range there are about twelve iron targets, with all modern improvements. It is practicable to get ranges up to at least 600 yards, and I regard it as important that this should be done. The many marksman's badges worn by members of both brigades indicate that the subject of target practice receives much attention at home stations.

The time from reveille to retreat was fully occupied with drills and ceremonies, and the evenings were given up to social visiting, band concerts, &c.

HEAVY ARTILLERY.

A law having been passed directing that one regiment should receive instruction in heavy artillery, an appropriation of $5,000 was obtained from Congress for building and arming an earth-work in the camp ground at South Framingham. This was fur-

nished, and the armament (consisting of two 10-inch sea-coast guns and four 10-inch siege mortars) placed therein in time for use this year. The First Regiment having been selected under the law, four companies, under Major Matthews, have been under instruction during the encampment of the First Brigade. Two other companies have also previously received some instruction. The companies were much interested in this, to them, new branch of the service, and I was very much surprised at the facility with which they worked the guns and mortars. No troops could have done better. Firing with the mortars took place one afternoon, the practice being very satisfactory, the mortars being handled and pointed as perfectly as could be desired.

After the breaking up of the camp, a delegation from the First Regiment made a visit to Fort Warren to witness the practice from the heavy guns at that place. The manner of preparing the shells, cutting fuses, &c., was explained to them, and they were very much interested in all they saw. Inasmuch as some of our sea-board militia would be required to man our forts in case of war, I think it would be well for the General Government to encourage this spirit, and offer facilities for the instruction of these troops, by permitting them to occupy some one of the ungarrisoned forts during the period usually devoted to camp.

MESSING.

The messing of the troops is, as a rule, done by caterers, one of these supplying several companies, all messing at same time in large tents. Some companies have their cooks and cater for themselves, but the former plan is the one generally adopted.

GUARD DUTY.

Brigade as well as regimental guard mounting took place every morning. In the First Brigade each regiment furnished its detail, but in the Second the whole guard was taken from each regiment in turn. The sentinels were fairly well instructed, and performed their duties as well as could be expected with so short a time for learning them. They all showed want of armory instruction, upon the necessity of which too much stress cannot be laid. Not more than one-third of the men in camp get a tour of guard duty, and it is important that they should be taught in the armories before coming to camp. The sentinels posted around the brigade headquarters were too much like automatons in their movements—all walking in the same direction, facing about together, and executing the same motions in manual of arms simultaneously. As a rule, officers crossing their posts were saluted, and at night all were properly challenged.

The field officers of the day made the grand rounds nightly, accompanied by the inspector-general of the State. Every effort was made to make the guards efficient, and the results were good, considering the time allotted to the duty.

CEREMONIES, DRILLS, DISCIPLINE, ETC.

Besides brigade dress parade there was one in each regiment immediately after the former. All the ceremonies were exceedingly well conducted. The dress parades of regiments, formation for inspection, and brigade dress parades were as perfect as could be desired. The guard mountings passed off, as a rule, very creditably, but not as smoothly as the others, owing possibly to want of practice in the ceremony.

The manual of arms in some of the regiments was perfect, and all showed a highly commendable proficiency in it. I took occasion to ride around the line at dress parades, and found the commands without exception very steady. I did not observe a hand move at brigade dress parades—the line being formed in line of masses, with artillery and cavalry on the flank. No troops could have made a better appearance.

At inspections the steadiness was good, but there was a disposition on the part of some of them to turn their heads to look at the inspector. These were, I believe in most cases, recruits, of whom there were more or less in each regiment. Arms were not, as a rule, properly thrown up for inspection. This should receive as much attention as any other part of the manual of arms.

Roll calls were promptly attended and company formations accurately made, an officer being present at roll calls. Battalion drills took place daily, and there was a steady improvement as the camp progressed. Regimental commanders handled their regiments skillfully, and the line officers showed a good knowledge of their duties. In the skirmish drill, firing by companies, battalion, and wing, the regiments all reached a high degree of perfection.

Except in the Fifth Regiment, *setting up* drill received no attention. This regiment shows the effect of this instruction in its bearing at inspection.

Discipline was excellent in both brigades; the men were cheerful and obedient; the line between officers and enlisted men being for the time distinctly drawn. All

seemed to be working for a common object, the placing of their commands upon a true soldierly basis.

I was astonished at the promptness with which the lines were formed for the various ceremonies, the companies marching from their streets simultaneously with the music of the bands.

There was one brigade drill in each brigade, the artillery and cavalry taking part, all moving with precision.

In the First Brigade a sham battle took place, but did not interfere with the regular routine of duty. An attack upon the camp was simulated; a platoon of artillery, supported by a battalion of infantry, having taken up a position on a knoll commanding the camp, opened fire upon it. *To arms* was sounded, and in about three minutes the whole brigade was formed and in motion to meet the attack; skirmishers were deployed, artillery and cavalry placed in position, and an advance made, the infantry opening with blank cartridges. The whole was conducted in a manner highly creditable to the brigade and its commanders. These affairs are not without their lessons, and when they can be indulged in without taking up time set apart for more important drills, they can be undertaken with benefit.

ARMS, EQUIPMENTS, UNIFORM.

The arm in the hands of the troops is the Springfield rifle, caliber .45. Some of the regiments have ten of the new pattern, with safety notch, in each company. They are all in serviceable condition, and as a rule in good order. In some regiments more attention was paid to the cleanliness of arms than in others. The troops have been furnished in the past year with metallic bayonet scabbards, new belts, and cartridge-boxes, the latter being of the Frazer pattern; all are in excellent condition, and belts usually well fitted. Little attention is paid to cleaning the brasses on accouterments. Occasionally men would be seen at inspection who had given the matter some care, and in one regiment (the sixth) all the members of one company had its belt-plates brightened. It adds so much to the appearance of a command that the men should be required to give it attention.

The knapsacks in use are very well adapted to present service, and consist of a light board box covered with enameled cloth. Each was plainly marked with letter of the company and number of regiment and man. Overcoats were rolled and strapped on top of knapsacks. Leggings of light-colored leather are worn by enlisted men in the infantry, and add very much to their military appearance. The men in the infantry all wear shakoes of plush, with sloping visor, white pompon, and insignia with number of the regiment in the center. In the artillery and cavalry, both officers and men wear the helmet with horse-hair plume. Dress coats are of an excellent quality of dark-blue cloth, double-breasted; chevrons and trimmings of color appropriate to the arm of service. Officers in the Second Brigade all wear the helmet with white horse-hair plume, while in the First Brigade some regiments have the helmet, and others the shako with feather plume.

For undress, a blouse of dark-blue cloth, similar to that in the regular Army, was worn; the forage-cap being of a sightly pattern, with sloping visor. Overcoats are single-breasted, of poor material as compared with the rest of the uniform, with short cape, and ill-fitting. A neat double-breasted overcoat, with ample cape, such as now supplied the regular Army, would be much more comfortable. The uniform worn by the brigadier-general commanding the Second Brigade corresponds with that of the regular Army, as does also that of his staff. That of the commander of the First Brigade and staff differ only in the head covering, which was a helmet with black horse-hair plumes. The non-commissioned staff at Second Brigade headquarters wore a dark-green dress uniform, with helmets, and hat-cords of black worsted and gilt mixed; dark-blue plaited blouses; and round fatigue caps, without visors.

PERSONNEL.

The *personnel* of all the commands was excellent. I saw very few old men in the ranks, and none in the infantry. All were soldierly in their bearing, of fine physique, thoroughly imbued with the military spirit, taking great pride in their commands and interest in their duties.

The officers are elected, but must pass an examination before the examining board before they can enter upon their duties. I had an opportunity of meeting nearly all the officers, and I was particularly struck with the efficiency they all displayed in the performance of military duty and their soldierly deportment.

LIGHT BATTERIES.

There were three light batteries at camp—two (A and C) in Second Brigade, and one (B) in the First Brigade. They are all fairly well drilled. There is a disposition in all of them to drill at the gallop, and the drivers urge their horses with the voice and

apply the whip too freely. They made a good appearance at inspection, especially those of the Second Brigade, the carriages having been recently painted. The horses of light batteries A and B were better than those of C, which were entirely too light for artillery service. Those of the two former were as well adapted for the service as could be wished. All were well groomed; harness was in good order and serviceable; saddle-blankets were soiled and stained, and detracted from the appearance of the batteries. These batteries should be furnished with all the necessary appliances for instruction, fuses, sights, samples of shot and shell, &c. More time should be devoted to elementary instruction in mounted drill. The officers of these batteries understand their duties, and both officers and men manifest great interest and zeal in their performance. They deserve much credit for what they have accomplished, as the batteries are only horsed twice a year. The stables were in excellent order, arms and accouterments well cared for.

CAVALRY.

The three companies of cavalry made an excellent appearance on inspection; they were exceedingly well mounted, many of them owning their own horses. Arms and accouterments in excellent condition, except in the matter of brightening the brasses, the same remark applying to them as to the infantry and artillery. Stables were in excellent police. Their proficiency in drill was highly commendable. As a rule, the men have good seats and ride well, especially those of the First Brigade, which company is made up of men residing in the country.

FIRST CORPS OF CADETS.

I accompanied the adjutant-general of the State from Boston to the camp of this command, at Hingham, 12 miles from the city. The location of the camp was all that could be desired, being about a mile from the waters of the bay, and a quarter of a mile from the town of Hingham. The camp was laid out essentially as prescribed in tactics, each company having a single row of tents. The *personnel* of this command could not be surpassed, being made up of the young business men of Boston and vicinity. A printed routine of duty was published to the command, and was not departed from. The weather being perfect during the period of the encampment none of the drills and exercises were omitted.

The following table shows the strength of the command:

Troops.	Present.		Absent.		Total present and absent.		Percentage of men absent.
	Officers.	Men.	Officers.	Men.	Officers.	Men.	
Field, staff, and band	5	4	2	.....	7	4	.....
Company A	2	22	.....	14	2	36	.....
Company B	2	21	.....	12	2	33	.....
Company C	2	21	.....	9	2	30	.....
Company D	2	21	....	12	2	33	.....
Total	13	89	2	47	15	136	34.5

The band of 18 members not being included in above.

Dress guard mounting took place at 8.15 a. m.; company drills, followed by target practice, consumed the mornings, and battalion drill, muster, and inspection and dress parade the afternoons. Much interest and satisfactory progress was exhibited among both officers and men. Excellent facilities were afforded for bathing, a commodious bath-house, with water introduced from the town mains, having been erected this year. Wooden tubs were supplied, and water could be carried to any part of the room by means of a flexible hose. Salt bathing could be indulged in also by going a short distance from camp. The police of the camp was excellent. Each tent had a gun-rack, four camp-stools, and a hanging shelf. All were required to be uniform in the arrangement of knapsacks, haversacks, &c. The officers' tents were also uniform with each other in furniture, &c. Bed-sacks, as in all the camps, were stored at reveille in a tent provided each company for that purpose. This is a State regulation.

Guard duty was remarkably well performed, sentinels being well instructed. A small pamphlet containing instructions for guards was furnished to the members of

the command. Recitations were held at the guard tent by the officers of the guard, resulting in a well-instructed guard. Some attention was given to signaling. The command showed great proficiency in company and battallion drill. The ceremonies of guard mounting, dress parade, review, and inspection were perfect. The manual of arms was all that could be desired. The good discipline of the command was marked. The camp was perfectly quiet after taps. Military courtesy was excellently observed, leaving nothing to be desired in this respect. In fact, I saw nothing meriting adverse criticism in anything connected with this command. Arms and accouterments were in excellent condition.

The dress uniform of the corps consists of a white cloth dress coat, double-breasted, with light-blue facings; pants of light-blue cloth, with white cord for all. Shako of same pattern as the rest of the militia, with white pompon, having a blue tip; officers and men wearing the same. Blouses of dark blue, with rows of wide black braid across the front—the insignia of rank worked on collar—were worn by the officers. Those of the enlisted men were same as in the brigade Militia. The cartridge-box is of an old pattern, not adapted to present ammunition, and is worn on a shoulder-belt. The latter has a breast-plate of white metal, and superimposed is a brass insignia of the corps, combining the arms of Shirley and Bowdoin, with motto "*Monstrat. viam.*" The waist-belt has a raised cross and motto.

MESSING.

The whole command messed at same time in a large tent, there being a table for each of the companies and band, and one for the officers. A caterer provided for them, as in the brigades, and men and officers fared alike. The kitchen is a very conveniently arranged one, 30 by 18 feet, with sleeping room for servants upstairs. This building is used as a store-room for much of the camp equipage between camps.

The sinks were pits, one for each company, the band and officers, surrounded by canvas stretched on posts, and divided from each other by partitions of same. Fresh earth was thrown in daily.

This command is not brigaded. It owns all its uniforms and equipments.

SECOND CORPS OF CADETS.

I accompanied the adjutant-general of the State to the camp of this command, at Essex, Mass., on the 7th of August. The following table shows the strength of the corps on the 11th of August:

Troops of Second Corps of Cadets.	Present.		Absent.		Total present and absent.		Percentage of men absent.
	Officers.	Men.	Officers.	Men.	Officers.	Men.	
Field and staff	8	4	.....	.....	8	4	.....
Company A	3	30	.....	11	3	41	.....
Company B	3	35	.....	7	3	42	.....
Total	14	69	.....	18	14	87	20.68

This command encamped at this place for the first time this year, having for a number of years visited Magnolia, Mass.

A printed routine of duty was issued, as in the other camps.

This command is the only one which pitches its tents entirely, going to the place of encampment on the day before time set for camp, and having everything in readiness for work the next day. The camp was very pleasantly located on an ample, cleared, level space, and surrounded by a pine grove. A lake, about a mile in length, gave facilities for boating and bathing. Excellent water was obtained from a pump, which supplied the whole command. Messing was in charge of the quartermaster, who purchased supplies, hired the cooks, waiters, &c. Officers and men fared alike, all messing at same time, with separate tables for officers and men. Camp was arranged essentially as required by tactics. The tents were not perfectly uniform in internal arrangement, and the presence of trunks and valises detracted from their military appearance.

The Springfield rifle, caliber .45, is supplied to this command also. The accouterments are similar to those of First Corps of Cadets, except in the insignia on breast and waist plates, this corps having a knight in armor, with motto "*Si recte facies. Sic itur ad astra.*"

The uniform is the same as that of First Corps, except that the dress coats are of scarlet cloth, pompons blue, with red tips. All have black stripes on pants. Blouses are same as in brigade militia. The uniforms are the property of the State. The camp was kept in excellent police. Sinks were dug in the woods.

Guard mounting and company drills, followed by target practice, consumed the morning hours, and battalion drill, dress parade, and muster and inspection the afternoon. This command labored under disadvantages this year, having lost forty-five men by expiration of service since May. All the non-commissioned officers were new to their positions, and many of the officers also. Notwithstanding this, they made a fine appearance at all ceremonies. At dress parades, review, and inspection the men were very steady, but at guard mountings there was a great lack of steadiness.

All ceremonies were conducted as perfectly as could be desired. Roll-calls were promptly attended and rolls properly called, an officer being present in each company. Lights were promptly extinguished at taps, and perfect quiet pervaded the camp. Military courtesy was excellent. The officers were well informed in all their duties, and take a great interest and pride in their organization, which dates from a few years prior to the adoption of the Constitution of the United States, as does that of the First Corps of Cadets. The review of both the bodies was received by the adjutant-general, representing the governor, who was not able to be present. Salutes were properly rendered, and the command passed in excellent form. A meteorological record was kept, as in the other camps. There was a well-appointed hospital, and two surgeons in attendance, but the sanitary condition of the camp was so good that their services were not often required.

It will be seen from the foregoing tables that nearly one-third of the enlisted men were absent. The aggregate authorized force of volunteer militia is 334 officers and 4,436 enlisted men. Of these 297 officers and 2,973 men were present in camp, being nearly 75 per cent. of the enlisted strength. Exigencies of business, objections of employers, and sickness are the main causes for non-attendance.

The governor of the State visited the camp of each brigade on the day preceding its breaking up, and spent the night in camp. He reviewed each brigade. All the commands passed in good form, alignments were well maintained, and the men steady.

Everything was done during my stay in the several camps to make my visit pleasant, and I am indebted to Generals Wales and Peach, and the officers of their staffs, and also to Lieutenant-Colonels Edwards and Hobbs and their officers, for many courtesies. To General Dalton, adjutant-general, I am under especial obligations for his unremiting attentions and many acts of kindness, personal and official.

Very respectfully, your obedient servant,

A. C. M. PENNINGTON,
Bvt. Col., U. S. Army, Maj., 4th Artillery.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D C.
(Through Headquarters Department of the East.)

HEADQUARTERS FIRST CORPS CADETS,
MASSACHUSETTS VOLUNTEER MILITIA,
Boston, July 18, 1883.

GENERAL: I have the honor to report that my command, in obedience to Special Orders, No. 55, dated Adjutant-General's Office, May 22, 1883, formed line in its armory at 9 o'clock on Monday morning, July 9th, and took the 9.45 boat for Hingham, where it arrived in camp at 11.30 a. m. Guard was mounted at 12 o'clock. Rifle practice, for want of time, was omitted; but from dinner-call that day until afternoon first sergeant's call on Friday, the 13th instant, the routine of duty was followed exactly as prescribed in standing orders in camp, a copy of which is herewith transmitted. For the usual battalion drill on the 13th instant, review and inspection were substituted, each company being mustered on the parade so soon as inspected. Regular routine was then resumed, including guard mounting on the 14th instant, after which, omitting company drill for that morning, the corps at 10.45 formed line and marched out of camp, taking the 11 o'clock boat for Boston, and arriving at its armory, where it was dismissed, at 12.45 o'clock p. m.

On the morning of the 10th instant a copy of the following order was received in camp, through the office of the Adjutant-General.

[Special Orders No. 121—Extract.]

HEADQUARTERS DEPARTMENT OF THE EAST,
Governor's Island, N. Y. H., July 7, 1883.

I—In compliance with instructions from the Headquarters of the Army, Maj. A. C. M. Pennington, Fourth Artillery, stationed at Fort Trumbull, Conn., is detailed to visit

the camp of the First Corps of Cadets, Massachusetts Volunteer Militia, at Hingham, Mass., between the 9th and the 14th instants, returning to his station upon completion of the service. The journey, as directed, is necessary for the public service.

* * * * * * *

BY COMMAND OF MAJOR-GENERAL HANCOCK:

WM. D. WHIPPLE,
Assistant Adjutant-General.

Major Pennington followed closely upon receipt of the above order. He quartered with the command during the remainder of the tour, carefully and patiently observing the performance of every duty, and daily inspecting the condition of the camp. I feel that the benefit and pleasure we derived from the visit of this officer cannot be too strongly represented. His ripe experience and attainments as a soldier, his courtesy in noting mistakes and omissions, and his desire to know our methods and to make himself familiar with the history and organization of the corps, encouraged a desire to aid him and to merit approval. I am sure that his visit had an influence for lasting good, and the wisdom of the Adjutant-General of the Army in thus detailing regular officers will be more apparent as time goes on. His excellency the commander in-chief was unable to visit camp. Adjutant-General Dalton, accompanied by Colonels Drinkwater, Sweeney, Huguly, and Hastings, of the staff, and Major Pennington, Fourth United States Artillery, received the review, after which General Dalton made a thorough inspection in company with Major Pennington. General Dalton, with the exception of Monday and the night of Tuesday, passed the week in camp, to the great satisfaction of the corps. Like Major Pennington, he closely observed everything, and benefitted the corps by many valuable suggestions.

Brigadier-Generals Wales and Peach, who, with Adjutant-General Dalton, are a board of officers to observe the efficiency of the companies of the militia organized as infantry, were expected to pass the week in camp. General Wales was present two days and one night, and General Peach one day, both being unable to remain longer owing to public duties elsewhere. Both, however, observed matters closely, so far as they could, General Wales, of course, having the better opportunity from his longer stay.

In the absence of Surg. W. L. Richardson (now in Europe), the duties of the medical department devolved upon Asst. Surg. C. H. Green, whose report, addressed to the surgeon-general, is herewith transmitted.

The weather during the entire tour was fine; not a duty was interrupted by rain or heat. The only rain which fell during the week was between 2 and 5 o'clock a. m. on the fourth night; it freshened the ground. The arrangement of the tents in the body of the camp was substantially the same as last year. Improved sinks were constructed; a portable bathing-shed, with running water from the town main, was erected, proving very beneficial; and a permanent store-house, with brick chimney and complete cooking apparatus for use as a kitchen during the encampment, was built. This building will contain the tent-floors, bedding, sink-frames, bath-shed sections, officers' tables, &c., and, if the corps is permitted to occupy the same ground in future, will save considerable expense heretofore incurred every year for transportation.

Rifle practice was under the charge of First Lieut. W. A. Hayes, jr., whom I detailed last winter as instructor in that duty, and in which he has proved himself a very efficient officer. His report will be made at the end of the season, and will be duly forwarded. I merely remark here, therefore, that this practice was had four days, viz. the 10th to the 13th instant inclusive, 200 yards, at two targets revolving horizontally, after what is known as the Laidley pattern, the markers being protected by a butt formed of old railroad ties placed on end (joints broken) inside a 2-inch plank boxing 16 feet long, 8 feet high, and 3 feet thick, with sand tamped in from the top to fill the interstices between the sleepers. As the result of previous armory practice and their practice in camp, every company in the corps now has a majority of its mem- bers entitled to compete for marksmen's badges, and is entitled to the first allowance of ammunition for individual field practice.

Signal practice was in charge of Capt. Andrew Robeson, detailed as instructor therein, but owing to the length of time taken up by rifle practice, the signal drill was practicable only on one day, and then only with two stations.

The remarks in my report of last year concerning the performance of duty and the attendance apply this year. The camp was for instruction, and the corps steadily improved from first to last; but the attendance was unsatisfactory. In trying to recruit our numbers we encounter on the one hand the apathy which refuses to believe that the public peace will ever again be dangerously disturbed, and on the other the hostility which refuses to believe that the militia of to-day is any better than it was fifty years ago. In time our militia may, by hard work, good behavior, and constant improvement, dispel the hostility, but I fear that nothing short of a calamity requiring the pres-

ence of the militia will ever awaken in it the interest of a large class of our citizens now so apathetic.

I am, very respectfully, your obedient servant,

THOMAS F. EDMANDS,
Lieutenant-Colonel, Commanding.

Brig. Gen. SAMUEL DALTON,
Adjutant-General of Massachusetts.

Table of attendance.

	Per cent. present.
July 9	61.58
July 10	64.90
July 11	66.90
July 12	64.90
July 13	66.90
July 14	67.55
	6)392.73
Average	65.45½

HEADQUARTERS FIRST CORPS CADETS,
MASSACHUSETTS VOLUNTEER MILITIA,
Boston, July 18, 1883.

GENERAL: In the absence of the surgeon, Maj. William L. Richardson, I have the honor to submit the following report of the medical department of the First Corps of Cadets during the recent tour of duty in camp at Hingham:

A second year's experience of the camp-ground proves it to be admirably adapted to the purposes of the corps, from both a military and a sanitary stand-point. The plateau affords a dry and reasonably level area for the chief portion of the camp, and the base of the sharp declivity on the north furnishes proper seclusion for the bath-houses, sinks, and some of the servants' quarters.

The weather during camp was excellent. It will be seen by the meteorological record, which I inclose, that, although on Monday night it was cold and damp, the mean average temperature of the remainder of the week was equable. A moderate southwesterly breeze prevailed most of the time. The health of the corps was excellent throughout the encampment; only two men reported sick at surgeon's call, and they were returned to duty in a few hours. Much attention was given to the sanitary condition of the camp. In place of the usual temporary cook-house, at best an unsightly and inconvenient shanty, the corps had caused to be erected a one and one-half storied, neatly painted, frame building, 32 by 20 feet in size. In the east end of the lower story is partitioned off a store-room, with ample ice-chests, in which perishable supplies can be kept. The remainder of the ground floor is furnished with a range, boiler, and heater, permanently placed, and with suitable tables and shelves for the convenient preparation and serving of food. The upper part of the building is provided with a raised frame platform on both sides, on which mattresses are placed; and here the servants find comfortable sleeping accommodations. When the corps is not in camp the building will serve as a safe and economical store-house for tent-floors, tables, and other camp equipage. No refuse or filth of any description was allowed to be deposited in or near the building. The garbage was collected in barrels and taken away; a cesspool on the north side of the house received the sewage; and the whole premises were kept in wholesome condition under the supervision of the medical department. The character and quality of the food likewise received the attention of the medical department, and unwholesome articles of diet were forbidden.

The health and comfort of the corps were greatly enhanced by the superior bathing facilities. The commanding officer had designed and caused to be erected a large, neatly-painted frame structure, put together in sections with hooks and screw-bolts, so that it could be conveniently taken apart and stored when not in use. The structure is 30 by 12 feet in size, with a platform 5 feet wide running along the north side, on which the building opens; the roof is of canvas. In the two ends of this building, screened off by canvas, were placed 16 tubs, and suspended from pipes laid on the beams above were suitable lengths of hose, each with a sprinkler attached, so that a very satisfactory shower-bath could be obtained. In the center of the building were suitable rests for 28 basins, which could be filled by means of hose depending from the pipes overhead. The basin-rests and the floor of the building were so constructed, by suitably inclining them, as to lead the water into a series of conductors opening into a wooden drain 18 inches in diameter, which carried the water underground to the

banks of the creek below. The sinks occupied the same position as last year, but they were of greatly improved construction. Permanent frames were made and neatly painted, and they will be stored for use at subsequent encampments.

Acting on the advice of Surgeon Richardson, I used the disinfectant employed by the Boston Board of Health and found it to be greatly superior to chloride of lime, which we had formerly used. Twice a day the disinfectant was sprinkled over the trenches and covered with a layer of clean gravel; in this way the sinks were kept inodorous throughout the encampment.

The water supply was the same as last year. Instead, however, of the temporary surface-pipes of the last camp, a pipe was permanently laid both to the new cook-house and the bath-house, and an abundance of pure water thereby furnished.

Very respectfully, your obedient servant,

CHARLES M. GREEN,
First Lieutenant, and Assistant Surgeon.

Brig. Gen. O. G. CILLEY,
Surgeon General, M. V. M.

HEADQUARTERS FIRST CORPS CADETS,
Boston, July 20, 1883.

Respectfully forwarded to the adjutant-general's office, with the request that this copy may be sent to the Adjutant-General of the United States Army for his information.

THOMAS F. EDMANDS,
Lieutenant Colonel, Commanding.

COMMONWEALTH OF MASSACHUSETTS, ADJUTANT-GENERAL'S OFFICE,
Boston, July 24, 1883.

Respectfully forwarded to the Adjutant-General United States Army, in compliance with the request of Lieutenant-Colonel Edmands, First Corps Cadets, M. V. M.

SAMUEL DALTON,
Adjutant-General.

FORT PREBLE, ME., *August* 25, 1883.

SIR: Pursuant to the requirements of Special Orders No. 145, headquarters Department of the East, I have the honor to report that I proceeded to Augusta, Me. on the morning of the 21st of August, arriving there at 10.30 a. m. I traveled from Portland on the special train which conveyed the various militia organizations from the eastern part of the State, and on arriving at the camp I proceeded to the brigade headquarters and paid my respects to Brig. Gen. John Marshall Brown, commanding, from whom I received a most cordial invitation to become his guest during my stay at the encampment, which I accepted, and was by him most comfortably established at brigade headquarters.

The site of the encampment and the position occupied by the different lines of the service (infantry and artillery) were identically the same as those described in my report of last year. This year the entire camp was pitched and the various tents provided with a proper complement of filled bed-sacks before the arrival of the main body of troops, so that everything was in readiness on their arrival.

One of the first improvements which struck my eye was the admirable mess arrangements which had been provided for the command. An immense marquee was pitched in rear of the regimental camps, extending equally on both sides of the general parade. This tent was divided by a canvas partition in the middle, leaving space on each side sufficient to accommodate a regiment. In each regiment the different companies were provided with separate tables, and seats enough to accommodate the entire command. About ten paces in rear of this marquee was built a long shed, parallel to and as long as the marquee, which was floored and partitioned off in such a manner that a small kitchen was formed for each company immediately in rear of the position of its mess-table in the tent, and each kitchen was provided with a first-class cooking stove. By these admirable arrangements the command was provided with conveniences which would have enabled them to take their meals in comfort during the most inclement weather, and the marked improvement in this particular over that of last year reflects much credit upon the author of so admirable a system. The mess-tables of the different regimental staff organizations were under the same marquee; small rooms being partitioned off on each side of the middle partition, thus giving these officers the necessary privacy, while at the same time their presence exercised a most salutary influence upon the discipline of the mess-tent. While on this subject, I may remark that the commissary department of the command was under the most able supervision, the troops during the whole encampment being, without any confusion whatever, supplied with ample rations, the basis of which was the regular Army ration,

somewhat increased by the issue of fruit and fresh vegetables. The good management exercised in this department was made patent by the total lack of complaints on that score, which almost invariably make themselves heard in such encampments.

It would seem that the experience of past encampments had also taught the various company commanders to avoid a wasting of the rations, as I heard no complaint on that subject, which convinced me of their good management and that of the company cooks.

At 10.45 the First Regiment, under command of Col. J. J. Lynch, marched in and took possession of its camp, on the left of the infantry line; and at 11.15 the Second Regiment, under Colonel Mitchell, arrived and took possession of their portion of the line. Both regiments made their appearance in most excellent form. The first meal served to the men was dinner, and was prepared for them prior to their arrival, and consisted of an ample ration of baked beans, brown bread, and coffee.

Since the last encampment a change has taken place in the camp organization of the militia of the State, Maj. Gen. J. L. Chamberlain having proffered his resignation, owing to the fact that severe illness rendered it impossible for him to devote such time as he deemed necessary for the proper instruction of the command; but, in order to retain the services of so able an officer, the governor of the State requested him to retain his command, while, in order to relieve him of the arduous duties of the annual encampment, the active militia was organized as a brigade, and John Marshall Brown, formerly colonel of the First Regiment, was commissioned brigadier-general in command; and under this organization the active militia of the State made its appearance at their summer encampment.

At about 2 p. m. a brigade guard-mounting took place, Lieutenant Milliken, of the First Regiment, acting as adjutant. Owing to a misunderstanding on the part of the adjutant of the Second Regiment of the requirements of tactics, the detail from that regiment did not make its appearance on the brigade parade in the proper manner—approaching their position in line by company details instead of as a consolidated regimental detail. This mistake was corrected promptly, however, and the ceremony well conducted to its termination.

A great fault that I noticed, which detracted in an immense degree from the military effect of all formations for guard-mounting, was allowing the crowd to infringe upon the precincts of the parade ground to such an extent as to almost completely surround the guard and band. This was so much the case that details, in marching to their position in the line, were compelled to maneuver to avoid the crowd, instead of the latter retiring before them. During all dress ceremonies sentinels should be placed so as to prevent the curious-minded, who have no business there, from encroaching upon the parade, which should be sacred ground during all ceremonies. This fault was also apparent last year, and its remedy in the future would add immensely to the military aspect of such formations.

A cordon of sentinels was established around the entire encampment, under the supervision of a field and a regimental officer of the day. This system of guard was a vast improvement upon that of last year, when, with two separate regimental guards, it became impossible to fix the responsibility for ignorance of orders or neglect of duty. In fact, it may be said that the system adopted in the last encampment was theoretically perfect, and if carried to a state of excellence in practice, will be above criticism. The individual performance of guard duty during the week was a marked improvement over that of last year; and this I think to be due, beyond doubt, to the uniformity of instruction which the guard must obtain when under one control and receiving daily its instructions from the same source.

I would strongly recommend that it be impressed upon each individual soldier by his immediate commander during the coming year the great responsibility of guard duty, and the great credit it reflects upon a command when it is punctiliously performed. Let every man be imbued with the idea that, when placed in charge of a post as a sentinel, his charge is a sacred one, and that he must command a proper and unvarying amount of respect from all, whatever their rank may be, who presume to approach its precinct; impress upon the men the fact that a proper performance of their duty reflects immediate credit upon themselves, and stamps them at once as "good soldiers"; teach them to walk their posts in a quick and military manner, instead of lounging, to offer their salutes in a brisk and decisive manner, and not to hesitate about it, and it will be found that not only will the respect of the masses for them increase, but their own self respect will rise as they succeed in surrounding themselves with and maintaining the dignity due to their position as sentinels. Above all things, let the officers of the command pay to sentinels the respect which is due them, and never in any instance neglect their obligations of official courtesy, which is as much due from a superior to an inferior as is the reverse. The custom of endeavoring to violate sentinels' posts, as, for instance, endeavoring, solely for the purpose of amusement, to deprive a sentinel of his gun, accouterments, &c., cannot be too highly deprecated, especially when participated in by officers of rank. However, the improvement in guard duty of this year over that of last, I must reiterate, was a marked

one. Let a similar effort be made in succeeding years, and all that can be desired will eventually be attained.

I was particularly pleased to see that the entire command had been furnished, since the last encampment, with serviceable blouses, and that the wearing of citizen clothing on the part of troops was almost entirely abolished, thus adding decidedly to the military *tout ensemble*. Only a part, however, of the men are equipped with forage caps, a portion of them being compelled to wear the discarded shako for a fatigue cap. I strongly recommend that by next year a full complement of fatigue caps be provided. Since last year the entire command has been equipped with overcoats, which is a condition of affairs that would have been quite acceptable during the last year's encampment. Now the men are well provided in this respect, and are prepared for all the inclement weather which is apt to be encountered in the summer season.

The exercises of the first day closed at retreat by a parade of the two regiments consolidated as a battalion, under command of Colonel Mitchell, of the Second Regiment. The ceremony was very impessive, and, with one or two minor mistakes, was tactically without error. The men were quite steady, and the entire formation highly creditable. Excellent order was maintained during the night in camp, and it may be said that the first day was a marked success.

Wednesday, the 22d, broke upon the encampment clear and beautiful, and the reveille gun awakened the command to a busy day. By the time for guard-mounting (8 a. m), the camp was thoroughly policed and everything in readiness for the day's work. The guard was mounted in an excellent manner, considering the fact that the adjutant of the Second Regiment, who officiated, was entirely new to his duties. Guard-mounting was over by 8.40, and between this time and 10 a. m. there was nothing done. This time, I would suggest, could be profitably employed in future encampments by having troop parade at 8 a. m., to be followed immediately by the establishment of a color line in front of the line of company tents; and this ceremony, followed by guard-mounting, would fill up the time until about 9.30 and still give the men half an hour to rest before the morning drill.

It is my opinion that the more work that is systematically arranged for the daily routine of this short week of muster the better it is for the men, and, certainly, the better for the accumulation of experience on the part of the entire command. In forming the color line after troop parade this opportunity could be embraced by the colonels of the different regiments alternately, for the purpose of giving the command about fifteen minutes' exercise (as consolidated battalions) in the manual of arms, which would be all the time that should be devoted to that exercise during the encampment outside of the amount of the manual which forms a part of dress ceremonies.

At 10 a. m., the drill call sounded, and the regiments were marched out, and, with the battery, mounted, maneuvered simultaneously on the parade. The colonel of the First Regiment devoted the greater part of two hours' drill to perfecting his regiment in the manual of arms. He certainly made a marked improvement in the manual of his regiment, but I am impressed with the idea that, as the encampments are of such short duration, the time should be entirely devoted to perfecting the troops in the marching maneuvers. The colonel of the Second Regiment gave his command quite a brisk drill, handling it in a practical and vigorous manner. Several movements in changing front in double time were well executed. At 12 m. the recall sounded and the troops were dismissed.

The battery executed several movements during the morning, and, in general, the drill was quite fair, although I do not think that the mounted-battery drill of this year was quite up to the standard of last summer; but it is only fair to remark that the command has recently changed hands—Captain Procter, the present commander, having but a short time ago received his commission. I am convinced, however, from what I saw last season in his management of the Lewiston platoon, that the battery is under excellent management. I was unable to ascertain what degree of proficiency they had obtained in the standing gun drill, as it did not take place during the encampment. The material in this battery is excellent, it being made up of young men of intelligence, and if the proper amount of zeal and *esprit de corps* could be elicited from them, there is no reason why it should not become one of the "crack" organizations of the country.

The evening parade took place under the supervision of Col. J. J. Lynch, of the First Regiment; the ceremony was excellently conducted, and may be said to have been tactically correct, with the exception of one or two minor errors, viz: the colonel stood at attention during the time that the band was playing, and the battalion at parade rest, and the adjutant, after receiving the reports, made his report to the colonel before ordering the first sergeants to their posts. These points were both, undoubtedly, oversights, and would not be apt to occur a second time, as both the colonel of the First Regiment and his adjutant are zealous students of tactics and take justifiable pride in their military commissions, and I am sure that the regiment will improve in their hands.

Excellent order was maintained in camp during the evening; but I noticed some disturbance in the main street of Augusta, in the vicinity of the State-house, where

a crowd of soldiers seemed to congregate habitually. This point was at the gate, the only entrance to the camp-grounds, and sometimes the crowd was so great as to impede the progress of visitors in and out. I would suggest, as a means to avoid this very disagreeable feature, that the guard be doubled, or even trebled, at this point, between the hours of retreat and taps, in order to keep this passage way clear; what would be still better, in my opinion, would be to cause the enlisted men of the command to use the other gate as an exit or entrance to the camp, stationing a strong picket-guard there to preserve order and prevent all egress from the camp on the part of enlisted men unless they are in possession of properly authenticated passes, and to arrest all persons returning to camp without them. This plan being elaborated, and the upper gate, near the main guard-tent, being preserved for commissioned officers and visitors, would, I think, do away in a great measure with the commotion and crowd around the guard-tent in the evening. Amidst such confusion the guards are, in a great measure, prevented from properly attending to their duties, for in a command where the time for instruction is so precious as it is in this one, the hours when off post should be spent in becoming conversant with their duties as sentinels. Corporals should spend their entire time either instructing or catechising their reliefs; instead of this, the greater portion of the time was employed by the guard talking with the crowd congregated around the tents; this should be stopped. During the afternoon of this day the governor and his council visited the encampment informally, and he expressed himself highly pleased with the aspect of everything.

Thursday, the 23d, was a beautiful day throughout. In the morning the usual guard-mounting took place; the ceremony being a highly creditable one. After which the Second Regiment spent a great part of the morning in company skirmish-firing, under supervision of Col. E. C. Farrington, inspector of rifle practice. The firing was excellent. The First Regiment spent its time in battalion manual drill, with some maneuvers, and the battery in the ordinary primary movements of the battery mounted. That afternoon being the time appointed for the governor's review, his staff assembled at the State-house at 2 o'clock, and, as the governor had appointed that time to receive my official call, I presented myself and paid my respects to him. At 2:30 an escort of honor arrived at the State-house, and the governor and his staff, mounted (the latter in full uniform), were escorted to the reviewing stand in camp, where he was received with the salute due his rank, after which the escort formed in line, and the review took place. The passage of the column before the reviewing stand was, beyond doubt, a most highly creditable maneuver; the men marched well, and the conduct of the entire command was such as to reflect the highest credit upon the State. It is seldom one sees under such circumstances better marching, or, in fact, troops presenting a more military appearance in every way.

After the review the regiments and the battery executed some maneuvers, when the only accident which occurred during the entire week's muster took place. No. 1 of the pieces of the battery had his hand badly shattered by a premature discharge of his piece. I was unable to discover the immediate cause of the accident, but imagine it to have been the combined carelessness of Nos. 1 and 3 of that piece, who, in sponging out, left a remnant of burning material in the bore, which occasioned the discharge; the rammer was blown from the piece some 600 yards, but, fortunately, injured no one. The day's work was completed by a most creditable parade.

Friday, the morning was spent in the usual routine exercises. General Chamberlain arrived in camp early in the day, and in the afternoon he reviewed the troops, the ceremony being, if possible, more creditable than that of the preceding afternoon. In the morning, General John F. Richards, the inspector-general of the State, inspected the battery and the Second Regiment. Through some misunderstanding, an invitation was not extended to me to accompany him during his tour, and I was thus deprived of an opportunity to report upon the individual condition of those commands when presented for inspection.

After the review I was requested by General Brown, and also by General Richards, to accompany them during their inspection of the First Regiment, which I did. I was particularly impressed with the general improvement in the appearance of this command since last year, and, as then, take pleasure in noting the particular excellence of Captain Norton's company (Portland Light Infantry). This officer, I have noticed for two years, has maintained a high condition of excellence in his company, and this year it presented at inspection an appearance which deserves special notice. The condition of the entire command was good, and I am convinced of the fact that the good influence of its present colonel will be felt, as he is a zealous and good tactician, and will seize those opportunities during the year for drill purposes which have heretofore been allowed to escape. The policing of the camp was excellent, and the mess arrangements and company kitchens in a very creditable condition, as were also the regimental sinks; these latter, however, although in a good state of police, were not originally dug deep enough, which error I recommend be remedied next year.

The afternoon was closed by separate regimental parades, the First Regiment parading about half-past 5 o'clock, under its colonel. The ceremony was an excellent one, the men being remarkably steady in ranks and the manual of arms very fine.

This parade was followed immediately by that of the Second Regiment, which ceremony was also such as to reflect credit upon that organization, although not quite as well carried out as in the First Regiment. With this parade the duty of the camp practically closed. The next morning early all preparations were made for breaking camp, the guards were relieved, and at 8 a. m., at the discharge of one of the battery guns, the tents were simultaneously struck, and Camp Chamberlain was a thing of the past.

In looking back upon the four days spent by the troops at this muster, the only regret one can express is that it could not have been prolonged to a week, as it was last year. The whole encampment was a complete success, and the experience, both to officers and men, cannot fail to be of immense service to them, and I sincerely trust that like progress may be made in coming seasons.

In concluding my observations, I would call attention to the fact that Maine has not as yet taken advantage of the recent legislation which allows maritime States to draw sea-coast cannon from the General Government for the establishment of heavy batteries. I would suggest that steps be taken to reap all possible advantage from the opportunity thus afforded. I would also suggest that the colonel of the First Regiment secure the co-operation of the captains of the various companies in Portland (five in number), including the battery and the "Cadets," for the purpose of establishing a regular series of battalion drills during the fall and spring. The city furnishes an excellent drill ground on what is known as the Western Promenade, and could these drills be established they would result in producing a battalion of as well-drilled troops as could be found in the country. The drills themselves would not be a hardship to the men, and if well attended by them, and if they occurred at regular stated intervals, they would soon become a feature of and add to the city's attraction. The regiment would gain in the opinion of all, and therefore acquire a solid reputation as a regimental organization, which at present it does not possess, although the companies themselves have excellent standing in the community as individual units of the organization to which they belong.

Of late years it has become the custom of States to request the presence of officers of the regular Army as inspectors of their annual musters in order to reap the benefit of their professional observations. I would suggest that this intermingling of the two services be still further extended for the mutual benefit of both parties, by the following means, viz: In those States where the capacity of the camp will admit of it, let a battalion of regular troops be encamped with the militia during their annual musters, the entire expense of their going to and from, and during their sojourn in camp, to be, of course, sustained by the General Government. Such battalions could and would, under these circumstances, exist as a practical working model for the rest of the command, and, in my opinion, their presence would be of immense advantage to the militia organizations. The presence in their midst of a body of regular troops, wherein all routine duty was fulfilled with the utmost rigor, would stimulate their volunteer comrades to emulate their example, and one season of such companionship in arms would do more than many years' experience obtained from the less forcible suggestions of individual officers acting as inspectors. During my sojourn at Augusta I could not help but be impressed with the zeal which inspired the higher officers for the welfare of the command. During the entire year the multifarious duties which devolved upon the adjutant, paymaster, and quartermaster-general of the State are most successfully carried to a conclusion by General George L. Beal, whose interest in behalf of the militia of the State seems unbounded. The present inspector-general, John T. Richards, is an officer who is particularly well fitted for the position which he holds, and his connection for some years past with the militia of the State has been of inestimable advantage to it. Apropos of the brigade formation, I take the liberty to recommend its continuance as giving the utmost compactness to the small command, and I am sure that the experience of this summer will establish this beyond a doubt, and no stronger evidence of the ability of the brigade commander, General J. M. Brown, could be required than the marked success which attended his efforts in the last encampment. In regard to these three general officers named, their experience was obtained most gallantly, as is well known, in the late war, and I deem that my association with them professionally for the past two years has been of great personal advantage to me.

I take the opportunity, in closing, to offer my acknowledgments to the officers of the State for the cordial and oft repeated hospitalities of which I was the recipient as a representative of the Army, and trust that future encampments of that body may, in every respect, be as highly successful as the last.

I am, sir, very respectfully, your obedient servant,

JOHN R. TOTTEN,
Second Lieutenant Fourth Artillery.

The ADJUTANT-GENERAL, UNITED STATES ARMY,
Through Headquarters Department of the East.)

MOUNT VERNON BARRACKS, ALA., *September* 7, 1883.

SIR: I have the honor to forward herewith report on the "National military encampment and competitive drill" at Indianapolis, Ind., August 13 to 17, 1883.

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The State military authorities wish to assemble the Indiana Legion, a body corresponding to the national guard and militia of other States, in an encampment of at least seven days every year, and the present encampment is the second which has been held. The object is to improve the troops in drill, discipline, and efficiency, and has been pursued in the face of discouraging conditions.

The name "Indiana Legion" is inherited from the civil war—a trophy with traditions of its own and with annals that should be famous. It is a token that the United States Government, in its extremity, called on Indiana, and not in vain, and United States officers may well heed with interest her measures to meet the inevitable call of the future; for the future will bring war as surely as it will bring winter and summer, and there will be no standing army then, as there is none now, and as there was none some twenty years ago.

In its complete organization the Legion is to be considered an army corps of —— divisions, each of three brigades, of three regiments, of three battalions, of four companies of not less than 42 rank and file, infantry, and an undefined force of cavalry and artillery. According to the State military code the governor appoints all officers above the rank of major; the other officers are elected by the men.

Many complaints were made, and probably justly, that the military code is defective, but an examination shows its provisions as far as they relate to organization to be good and in advance of many other States. It seems, however, to require periodical legislation and appropriations to keep its machinery in motion, and to have become largely a dead letter from the lukewarmness and indifference engendered by a feeling of security peculiar to young and prosperous communities, and probably by the pressure of what such communities are apt to consider vastly more important interests. After providing for a very complete organization, the supply of arms and equipments, and for a system of instruction, the military code creates administrative councils and company, regimental, and general courts-martial, modeled more closely after corresponding bodies in the regular service than is usual in the militia, and with power to enforce the attendance of witnesses. It makes provision for the collection by civil process of fines inflicted by courts-martial, and for the arrest of officers and non-commissioned officers, and the confinement of musicians and privates, and empowers the commanding officer of an encampment or assembly of State troops to exclude and, if necessary, arrest civilians who intrude; and, finally, makes the rules and regulations provided for the government of the United States Army, as far as applicable, to apply to the government of the militia.

The code has about one hundred sections, of which no less than sixteen insist on conformity with United States Army regulations and custom of service. Its great defect is that it offers absolutely no inducements to a citizen of Indiana to join the State troops; on the contrary, it invites him to do so at a cost to himself of time and money which nothing but positive devotion to military duties could lead him to assume. He must swear "to support the Constitution and laws of the United States and of the State of Indiana against all violence of whatever kind or description," and provide himself with a uniform within a stated period. He must attend drills, parades, and encampments, and answer the call of the proper authorities to suppress disturbances, and he presumably is personally responsible for the arms and equipments issued to him. If in active service (that is, called by the proper State authorities in case of riot or disorder), he is paid, but otherwise he may look in vain for any recompense or advantage, direct or indirect, incidental to his position. He is not excused from jury duty nor exempt from any taxes.

It was complained that under the code officers had no means of enforcing discipline, or, indeed, of compelling obedience to their orders; also, that fines could not be enforced or collected, and in general that the whole system was purely voluntary. It is difficult to discover the reasons for this by perusal of the code, and they must be due largely to extraneous conditions of law, custom, prejudice, or convenience in conflict with it. The complaint of entire lack of duly appropriated funds is more tangible, and would alone seem sufficient to excuse and account for all short-comings. With all these disadvantages the citizens of Indiana join the Legion in considerable numbers. It is not quite clear why. Not as an echo of the war, for the men are all young and took no part in that. The uniform conforms essentially to the depressing fatigue dress of the regular service and must be the reverse of attractive; and the general lack of suitable armories should greatly limit all social inducements. It is gratifying, therefore, to assume that a good many Americans are fond of military affairs and have qualities which make good soldiers; that if given a chance to exercise them, many will do so; while with proper encouragement a genuine and enthusiastic military spirit may be created and retained in a whole community.

The adjutant-general of the State seemed to be the main-stay and dependence of the Legion, and it is not difficult to imagine that body the reverse of progressive without his experience and energy to encourage and sustain it. He is a graduate of the war, with the unmistakable stamp of active service. Without wasting time in regrets at the discouraging situation he has taken hold of what he found, and with great singleness of purpose and with such means as he can command or contrive is building up a State militia. The second encampment at Indianapolis gave abundant evidence of satisfactory progress of the work.

It is in some respects unfortunate that it was necessary to surround the encampment with the features of a picnic and the attractions of a county fair. These are not in consonance with anything in the military profession, regular or volunteer, and any popular impression to the contrary is a vicious relic of old "training days" which should be dispelled. But, from the absence of appropriations already mentioned, the large fund to provide transportation of troops to and from distant places, and their meals while in camp, together with large prizes and numberless contingent expenses, had to be raised by entrance fees, the sale of privileges, and the contributions of interested tradesmen. However, in the large crowds drawn to the grounds, it was easy to distinguish many a rustic from cross-roads or clearing who must have received conceptions of system and good order, of restraint and subordination, that certainly were new and could not but be wholesome, for the camp was in no way identified with the holiday surroundings necessary to defray its cost. Here there were a morning and evening gun, the national flag, the stated calls, the drills and fatigue parties, clean company streets, kitchens and sinks, order and discipline, with a marked absence of what is known as "fuss and feathers."

A thorough special inspection and daily observation showed the camp to be in excellent condition and its duties well performed, including the important matter of police. The subsistence, assimilating in quality and quantity to the Army ration, was properly cooked, and the bread sweet and well baked. Cooking utensils, knives, forks, &c., were kept bright and scoured, and in general the whole endeavor pointed to the recognition of a well-defined regular standard and a desire to conform to it. This was marked even in trivial matters, and is, without doubt, a result of the closer relations which of late years have gradually matured between the Regular Army and the militia. There was an evident earnest will to do the right thing at the proper time, in the correct manner, which was admirable. When they sometimes failed, as they did glaringly on dress parade and at guard-mounting, &c., it was irritating to reflect how much of military knowledge, now smothered in thankless routine, might be made available in imparting systematic instruction to these and other troops. It would certainly be a grateful duty in this case; the men are active and young, clear-eyed and intelligent, neither tall nor short, but with the well-knit nervous build indicative of endurance which has been held to be typical of Americans. As material for light troops—and what other kind are wanted—they cannot be equaled; and, if what was said on all sides meant anything, such instruction would be heartily welcome. They are State troops, it is true, first and foremost for that service; yet an undercurrent of devotion to the General Government and loyalty to its service was palpable; and if in the not too distant future the emergency arise, the leaven of discipline and soldierly knowledge which they will furnish will be significant indeed. A large majority of both the infantry and artillery, perhaps one thousand, would make capital line officers in their respective arms. As militia it would of course respond promptly to the call of the State, and the State which has left it to struggle into existence unaided, to borrow its tents from dealers, and collect its expenses from side shows, may one day breathe the more freely from the assurance.

What may variously be considered a chief or secondary feature of the encampment were the competitive drills, cavalry, artillery (mounted and dismounted), and infantry—one series exclusively for the Legion, and another "free for all." They were for valuable money prizes, and smoothly and well conducted, barring faulty and inadequate rules under which these drills are now everywhere held. A small company of cavalry, armed with sabers only, and not properly equipped, whose members were said to own their rather good horses, drilled some simple movements without competition. A four-gun battery, with caissons, four horses to a carriage, made up of the various home-gun detachments, and, considering the difficulty of the task, surprisingly well equipped, did some unexpectedly good drilling under the circumstances, also without competition.

Quite unusual was the interest taken in the artillery arm, as manifested by the number of gun detachments present from various parts of the State. This is possibly due to the comparative ease with which the small number of men necessary can be found in the smaller towns; but their drill, bearing, and equipment were excellent. Two or three of the best went through the manual of the piece, including the mechanical maneuvers, in a manner it would be difficult to excel. The best, a section from Indianapolis, were so prompt and correct in their drill and so soldierly in appearance and bearing that it was instructive to superintend them. At the Artillery

School, United States Army, the mechanical maneuvers of the 3-inch rifle were not executed with as much precision and facility as late as 1873. This detachment was afterwards beaten in the "free for all" competition by a section from Louisville, Ky., but by a few points only. A Gatling gun detachment, composed exclusively of young boys, also went through the complete drill of that piece with great accuracy and vigor.

The Infantry Legion programme included the manual of arms and the prominent movements of the school of the company. The inspection found the condition of the arms, as is usual in the militia, far below what it should and might be; the equipments in general fair, and the clothing good; the military appearance and bearing *very* good; in fact, the absence of constraint and stiffness and a good deal of ease and "swing" were noticeable among all the troops at the encampment.

In the Legion three companies only competed, and the drill of the lowest was not poor. That of the Indianapolis Light Infantry, which took the first prize, was worthy of unqualified praise; while it lacked in part the phenomenal precision peculiar to some of the southern companies that have recently drilled in public, and which displayed great accuracy under intense strain, it was as a whole, if not better, at least more satisfactory and desirable for practical purposes. As a whole, it left an impression of ease and mobility, with all the precision necessary, peculiar to regular troops. This company also entered in the "free for all" contest, in which it easily beat two good competitors—the Branch Guards, of Missouri, and the Paris Light Infanty, of Illinois. The programme comprised 154 movements, essentially all of the "school of the soldier" and "school of the company," and was completed by the Indianapolis Light Infantry in 43¼ minutes of the 45 minutes allowed. The two competing commands at the expiration of their time had each completed about one-half as many, though there was nothing conspicuously dilatory in their drill. The programme is, therefore, interesting and worthy of record as furnishing a fair standard of what a well-drilled command should accomplish in a given time.

All of the Infantry Legion programmes included the most important movements of the "skirmish drill," which was generally executed well and smoothly.

The encampment ended with a sham battle, which merits no special mention.

WILLIAM A. KOBBÉ,
First Lieut., Third Artillery, Bvt. Maj., U. S. Army.

The ADJUTANT-GENERAL UNITED STATES ARMY,
Washington, D. C.

FORT WAYNE, MICH, *August* 21, 1883.

SIR: I have the honor to submit the following report of my observation at the militia encampment held at Indianapolis, Ind., August 13 to 17, inclusive, as directed per Special Orders, No. 27 dated "Headquarters Military Division of the Atlantic, Governor's Island, New York Harbor, July 13, 1883."

The laws of the State of Indiana make no provision for the support of the militia, which now consists of three regiments of infantry, one battery of artillery, one company of cavalry, and two sections of Gatling guns. It is therefore much to the credit of General James R. Carnahan, adjutant-general of the State, to whom, I believe, it is almost entirely due, that he has succeeded in so short a time in organizing and bringing to their present state of efficiency so many companies. Besides the Indiana Legion, there was in camp one section of artillery from Louisville, Ky.; one company of infantry (Branch Guard) from Saint Louis, Mo.; and one company of infantry (Paris Light Infantry) from Paris, Ill. Considering the recent organization of the majority of these companies, they showed great proficiency both in drill and conduct of camp duties; camps were well policed, tents well pitched, bedding in good shape, kitchens and kitchen utensils fairly clean. The camp of the Indianapolis Light Infantry was probably the cleanest, but their kitchen utensils were below the average. Arms and accouterments of nearly all the companies were not clean; much improvement in this should be expected.

The greater portion of each day was devoted to the competitive drills, in which the following companies participated, and their standing judged as follows:

INDIANA LEGION.

Artillery.—Section B, Indianapolis Light Artillery, first; Section A, Indianapolis Light Artillery, second; Columbus Light Artillery, third; Rockville Light Artillery, fourth; and Porter Light Artillery, fifth.

Infantry.—Indianapolis Light Infantry, first; Richardson Zouaves, second; and Tecumseh Rifles, third.

Zouaves.—Richardson Zouaves, first; and Dick Thompson Zouaves, second.

Mounted artillery.—Indianapolis Light Artillery, first.

FREE FOR ALL.

Artillery.—Louisville Light Artillery, first; Section B, Indianapolis Light Artillery, second; Columbus Light Artillery, third; Section A, Indianapolis Light Artillery, fourth; and Porter Light Artillery, fifth.

Infantry.—Indianapolis Light Infantry, first; Branch Guard, Saint Louis, second; and Paris Light Infantry, third.

SPECIAL.

Gatling gun.—Section No. 1, Indianapolis Gatling Gun Detachment, first.

Cavalry.—The Smith Gavitt Cavalry, first (no competition); and Indiana Veteran Corps, first (no competition).

In general, the camp was very orderly and under an excellent state of discipline; orders were obeyed promptly, and duty willingly performed. Commissioned officers should pay more attention to the forms of guard mounting, dress parade, and other ceremonies, and should insist more rigidly upon their proper execution as regards minor details.

In conclusion, I desire to say that the officers on duty there as judges and inspectors were treated in the most cordial manner by all officials connected with the encampment.

I am, sir, very respectfully, your obdient servant,

WM. L. KELLOGG,
Captain, Tenth Infantry.

ADJUTANT GENERAL UNITED STATES ARMY,
Washington, D. C.

FORT WAYNE, MICH., *August* 21, 1883.

SIR: In compliance with Special Orders, No. 17, dated "Headquarters Military Division of the Atlantic, Governor's Island, New York Harbor, July 13, 1883." I have the honor to submit the following as the result of my observations while acting as judge and inspector during the military encampment held at Indianapolis, Ind., from August 13 to 17, inclusive:

The encampment consisted of the following organizations: Parts of the First, Second, and Third Regiments of Infantry; sections of the Indianapolis Light Artillery; the Columbus Light Artillery; the Rockville Light Artillery; the Porter Light Artillery; the Indianapolis Gatling Gun Detachment; and the Smith Gavitt Cavalry—all of the Indiana Legion. There were, in addition, from other States, the following troops: H, section of the Louisville Light Artillery, Louisville, Ky.; the Branch Guards, Saint Louis, Mo.; and the Paris Light Infantry, Paris, Ill. The encampment was under the command of Brig. Gen. James R. Carnahan, adjutant-general of the State.

The camp was well laid out, and in a good state of police. A regular commissary department supplied the company messes with good and wholesome rations, and a medical department was ready to attend to the wants of the sick. Officers and men alike occupied wall-tents, generally floored with boards. Their bedding consisted of such as they brought from their homes. The tents were in good order. The arms and accouterments, with the exception of the Indianapolis Light Infantry, were not in as good condition as they ought to have been as to cleanliness. The discipline seemed to be excellent; the men were orderly and well behaved, and full of zeal in the discharge of their duties. When it is taken into consideration that the oldest organization was but little over a year old, and the youngest but two or three months old, and that the State of Indiana, as I am told, has no militia law and provides no means for the support of a militia organization, the only wonder is that they appeared as well as they did.

The success of the encampment was largely due to the personal exertions of General Carnahan, who was ably assisted by an energetic corps of staff officers. The feature of the encampment was the prize drills. The drills were by sections of foot artillery, light battery (mounted), sections of Gatling battery, cavalry, zouave, and infantry. The artillery drills were excellent. The Gatling gun sections were made up of boys, the oldest of whom was not more than fourteen and the youngest not more than twelve years of age. The excellency of their drill was simply wonderful. The gunner could not have been more than twelve years old, and yet no man could have or did perform his duties better. Of the two zouave companies, the Richardsons was much the better company. It was well handled, and drilled well. It might, in time, make a first-class company.

A free for all infantry drill was open to companies from other States. There were but three entries—the Indianapolis Light Infantry, the Branch Guards (of Saint Louis Mo.), and the Paris Light Infantry (of Paris, Ill.). There were two prizes—first prize

$1,500; second prize, $750. The first prize was carried off by the Indianapolis Light Infantry, and the second prize by the Branch Guards. The time allowed for the drill of each company was 45 minutes, and the programme by which they were to drill consisted of 149 numbers, and some of the numbers included two or more movements. Most persons thought it would be impossible to complete the schedule in the time allotted. The first company to drill was the Paris Light Infantry. It was a fine body of men, and drilled well. At the end of 45 minutes it had completed but the hundred numbers of the programme. Then came the Branch Guards, of Saint Louis—an excellent company. It executed the manual, including the different firings, admirably. Its drill was better than that of the first company. It stopped on the same number of the programme as the Branch Guards. Last came the Indianapolis Light Infantry—a splendid body of men. As it progressed in the drill it gained confidence, and the commands were given and executed with lightning rapidity and without slurring. Its drill, as a whole, was superb, and when time was called it had executed the last number in the programme (149).

The events of the encampment closed with a sham battle, in which all of the troops took part.

Great credit is due General Carnahan, to whose untiring energy the fact of the encampment was mainly due.

Very respectfully, your obedient servant,

J. A. P. HAMPSON,
Captain, Tenth Infantry.

ADJUTANT-GENERAL UNITED STATES ARMY,
Washington, D. C.

FORT WAYNE, MICH., *August* 20, 1883.

SIR: In compliance with Special Orders No. 27, Headquarters Military Division of the Atlantic, dated July 13, 1883, I have the honor to submit the following report of my observations while attending the encampment of the Indiana State troops at Indianapolis, Ind., from August 13 to 18, 1883:

The troops encamped at the above place were portions of the First, Second, and Third Regiments of Infantry Indiana National Guards, the Indianapolis Light Artillery, the Rockville Light Artillery, the Columbus Light Artillery, and the Porter Light Artillery (all belonging to the State troops); the Branch Guards, of Saint Louis, Mo.; the Paris Light Infantry, of Paris, Ill.; one section of the Louisville Light Artillery, of Louisville, Ky.; and the Smith Gavitt Cavalry Company, of Evansville, Ind.—all under the command of Brig. Gen. James R. Carnahan, an officer of considerable experience, and one who seems to have a proper appreciation of his duties and responsibilities. The camp was well selected, and laid out according to regulations.

The drilling of the infantry companies was fair, considering that almost all of the companies in camp had been organized less than a year, and some less than six months, and as the laws of Indiana are such that there is no way by which the attendance of members of the State troops can be required at drills or encampments.

Discipline in camp was well maintained. Police of camp was good. Each company was supplied with rations from the commissary department, and company messes were abundantly furnished with excellent food.

The foot artillery drill was a feature of the encampment, and was performed in an excellent and spirited manner, reflecting great credit upon both officers and men.

The free-for-all infantry drill was also an excellent performance. It was participated in by the following organizations: The Indianapolis Light Infantry, of Indianapolis, Ind.; the Branch Guards, of Saint Louis, Mo.; and the Paris Light Infantry, of Paris, Ill. The first prize was for $1,500 and the second prize was for $750, awarded as follows: Indianapolis Light Infantry, first prize and Branch Guards second prize.

In the mounted artillery drill the horses were some which had been hired for the occasion, as the battery has as yet no horses of their own. It is no easy matter to take green horses and, in a few days, make a good showing with a light battery; yet I must say that all the movements were done in a very creditable manner, and showed that the officers and men had been well drilled in handling their guns.

The arms of the infantry companies were not found in as good condition as they might have been, and a little more time spent in cleaning them would show a vast improvement. This might more especially refer to the companies of the First Regiment Indiana National Guards, which, I understand, is composed entirely of men who have seen service during the late rebellion.

The last day of the encampment witnessed a sham battle, in which all the troops took part, and were very well handled.

In conclusion, I would make the following suggestions: (1.) That captains of companies see that the arms of their companies are kept in a proper manner; that they

inspect them at least once a week. (2.) That more time be devoted to the "school of the soldier," particularly to the setting-up drill exercises. (3.) That before the next encampment the Articles of War (or so much as relates to a soldier's duty, by which all soldiers are governed when in service) be read to each company. (4.) That a uniform be adopted for all regimental, field, and staff officers, as I noticed some of them wore uniforms evidently of their own choosing.

I am, sir, very respectfully, your obedient servant,

CLAYTON S. BURBANK,
First Lieutenant, Tenth Infantry.

To the ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

FORT OMAHA, NEBR., *September* 7, 1883.

SIR: Under instructions from the headquarters of the Army, Adjutant-General's Office, of August 23, 1883, I have the honor to report the result of my observations during the encampment of the First Brigade Iowa National Guard, at Fairfield, Iowa, from the 13th to the 18th of August, 1883, and of the Second Brigade Iowa National Guard, from the 27th of August to September 1, 1883, at Cedar Falls, Iowa, viz:

The State of Iowa is divided into two military districts, and the organized troops in the towns along the line of the Rock Island Railroad and to the south of that line form three regimental organizations (the Second, Third, and Fifth Regiments of Infantry). These three regiments constitute the First Brigade, commanded by Brig. Gen. Lyman Banks. All of the troops north of the aforementioned line of railroad, consisting of the First, Fourth, and Sixth Regiments of Infantry and a battery of field artillery, constitute the Second Brigade, which is commanded by Brig. Gen. C. S. Bentley.

Upon my arrival at the encampment of the First Brigade I was invited to share the general's tent, which I accepted, at the same time tendering my services in any way that could be of use. The general accepted this offer in the same spirit in which it was made, and I was not only requested to assist in the muster and inspection of the command, but was earnestly solicited by the colonels of the regiments to exercise the troops at battalion drill. Unfortunately, however, there was so much ceremony crowded into the short space of five days as to preclude the possibility of drilling more than one regiment (the Second). Of course, previous to each movement, I explained the maneuver, and such was the attention paid by the officers and men that the movements were executed with scarcely an error, save those of a minor character and liable to occur anywhere. I drilled this battalion for over two hours, and then remarked to the colonel that I must have tired them out, and would dismiss them; but, contrary to my expectations, the officers, and through them their men begged me to continue, which I did half an hour longer. This interest combined with the subsequent requests of the colonels and captains of the other regiments to drill them, convinced me of the great desire that officers and men have to learn their duties.

Upon inspection of the brigade I found the men to be, with few exceptions, of a hardy, self-reliant yeomanry, browned by the sun of the harvest field, and of excellent physique. Several of the companies from the larger cities were armed with the latest improved Springfield rifle, caliber .45; but the majority were armed with the .50 caliber, bright barrels, and in poor order. The accouterments, waist-belts and plates, cartridge-boxes, and bayonet scabbards were old and worn out, and, necessarily, in bad condition. The clothing of the troops was excellent, being the uniform of the regular Army, although several of the companies possessed, in addition, fancy dress uniforms, purchased by the individual members, and worn when not at the encampment or in contests for prizes.

I assisted General Banks in his preparation for a review of the troops by the governor of the State, and such was the aptness of the officers and men that when the review took place, it equaled, in its general military appearance, that of many of the volunteer brigades seen during the war of the rebellion after having been in the field for a year or more.

The competitive prize drill was contested by three companies, although the company (colored) which obtained the third prize did not execute more than one-half the movements laid down in the programme. The awards made by the judges (of which I was one) were as follows: Company C, Second Regiment (Muscatine), 88.79 out of a possible 100, time 44 minutes, first prize, $200; Company E, Fifth Regiment (Shenandoah), 75.46, time 48 minutes, second prize, $100; and Company E, Third Regiment (colored, Des Moines), 57.49; time not considered; prize, a stand of national colors.

I returned to my station at Fort Omaha on the 18th of August, and on the 25th received orders, accompanied by a letter from the adjutant-general of the State of

Iowa, and proceeded to the encampment of the Second Brigade Iowa National Guard, at Cedar Falls, Iowa, arriving there early on Tuesday, the 28th. I found that the troops had all arrived in camp the day before. I was very kindly received by the governor and his staff, and generously entertained during the encampment by Brig. Gen. C. S. Bentley and the officers of the brigade generally.

The 28th was consumed by a street parade in the morning and a review by the governor of the State in the afternoon. This review was very creditable indeed, and the general military appearance excellent, considering that the companies had only been brought together the day before.

The 29th was occupied with an inspection and muster of the command by the inspector-general of the State. The same remarks, as regards the clothing, arms, and accouterments, as made with reference to the First Brigade, are applicable to the Second Brigade.

The 30th was the day set apart for the competitive drill, which took place at 3 p. m. Three other officers, with myself, constituted the judges, and the following awards were made: Company A, Fourth Regiment (Boone), 8.2 out of a possible 10, time 20 minutes, first prize, $200; Company I, First Regiment (Waukon), 7.6 out of a possible 10, time 20 minutes, second prize, $100; and Company D, First Regiment (Marshalltown), 7 out of a possible 10, time 20 minutes, third prize, $75.

On the 31st, the last day of the encampment, a sham battle was planned and carried out very successfully, without accident, the command displaying much tact and excellent discipline throughout.

In connection with this brigade there was a battery of four field guns, with carriages and limber. These consisted of one old 10-pounder Parrot, one 12-pounder Napoleon, and two very old 6-pounder iron guns. In firing salutes, at drill, and during the sham battle the guns were ably handled and fire delivered regularly, with surprising rapidity.

The officers and men were uniformed in dark blue throughout, with artillery facings.

Both of the general officers, nearly all of the field officers, and a majority of the captains in both brigades have seen service during the war of the rebellion, and this experience tends largely towards the successful maneuvers of the battalions. All their practical knowledge of maneuvering is based upon Hardee's or Casey's tactics, and what they need is an opportunity to practically test the present system of tactics, with which, however, I found the greater number theoretically familiar.

SUGGESTIONS.

(1.) That more attention be paid to the selection of fields for encampment. Lack of water in both the camps was a serious evil, and offered inducements for uncleanliness. Camps should, if possible, be located upon a stream of water, with facilities for bathing, washing, &c.

(2.) The police of the camp grounds is indispensable to the health of the troops. Not enough attention was paid to this matter in either of the camps.

(3.) Decent and convenient latrines should be constructed for officers and men; otherwise the use of the one that is indecent, or the absence of any, causes men to neglect the calls of nature, and sickness soon follows.

(4.) A longer period of encampment is absolutely necessary for the proper drill and instruction of the National Guard. Too many ceremonies are now crowded into the five days' encampment, which necessarily precludes the possibility of much drill or experience in camp matters, particularly with regard to guard and other duties. The encampment should not be for less than ten days, and, if possible, should extend thirty days. In order to meet this, however, some action should be taken by the General Government, in the way of an appropriation, to pay both officers and men for the time they would be absent from their civil pursuits.

5. One or more companies of regular troops ordered to attend these encampments would produce excellent results in the way of example as to discipline, guard duty, regularity of details, &c., being satisfied that their presence would be desired by all officers and men of the National Guard.

In conclusion, I would state that, on the whole, I consider the National Guard of the State of Iowa well organized, well officered, fairly equipped, well drilled (for the opportunities they possess), and subordinate to a high degree, having seen but one single case of drunkenness and one of insubordination in the camps of both brigades.

I have the honor to append hereto consolidated reports of officers and men present in camp.

I am, sir, very respectfully, your obedient servant,

WILLIAM H. POWELL,
Captain, Fourth Infantry.

ADJUTANT-GENERAL UNITED STATES ARMY,
Washington, D. C.

Abstract of reports of attendance of the Iowa National Guard at the encampments at Fairfield and Cedar Falls, Iowa.

Designation of troops.	Present.	
	Officers.	Men.
First Brigade, August 13–18, 1883.		
Commander, staff, and band	10	20
Second Regiment	30	289
Third Regiment	26	258
Fifth Regiment	29	311
Total	95	878
Second Brigade, August 27 to September 1, 1883:		
Commander, staff, and band	8	16
First Regiment	24	217
Fourth Regiment	20	303
Sixth Regiment	28	211
Battery (four guns to limbers)	3	32
Total	83	779

FORT SNELLING, MINN., *August* 1, 1883.

GENERAL: In compliance with instructions from your office, dated July 26, 1883, I have the honor to inclose herewith copies of my reports to his excellency the governor of Minnesota, in connection with my official visit to the encampment of the National Guard, at New Ulm and White Bear Lake, in this State.

I am, general, very respectfully, your obedient servant,

GAINES LAWSON,
Captain, Twenty-fifth Infantry.

To the ADJUTANT-GENERAL UNITED STATES ARMY,
Washington, D. C.

FORT SNELLING, MINN., *July* 30, 1883.

GOVERNOR: At your request and in compliance with Special Orders No. 117, headquarters Department of Dakota, dated July 3, 1883, I have the honor to submit the following report of my observations while in camp with the State troops at Camp Hubbard, near New Ulm, Minn., from July 10 to July 15, 1883:

The troops encamped at the above place were the Second Regiment Minnesota National Guard and Emmet Light Artillery, all under the command of Col. Joseph Bobleter, of the Second Minnesota Regiment, an officer of considerable experience in the war of the rebellion, and also in the regular Army since that war, and one that seems to have a proper appreciation of his duties and responsibilities. The camp was selected on an elevated piece of ground near the Minnesota River, about one mile from the town of New Ulm; and while the camp was not laid out according to tactics, yet it answered the purpose for which it was intended, viz, one week's encampment. Much work was performed during the encampment. The company drills were fair in the manual and company movements, and two of the companies, A (Echstine's) and B (Hunter's), drilled quite well in the skirmish drill on several occasions. The battalion drills were good, considering that five of the companies were new troops, having been organized since their last annual encampment, as follows: Company F, Captain Burgess, stationed at Mankato, June 28, 1882; Company G, Captain Anderson, stationed at Austin, September 8, 1882; Company H, Captain Goodrich, stationed at Blue Earth City, February 16, 1883; Company I, Captain Donahower, stationed at Saint Peter, March 14, 1883; and Company K, Captain Simmons, stationed at Little Falls, April 12, 1883. The above-named companies were never in camp before, and, consequently, it was not expected that they would be as proficient as older companies, but during the latter part of the encampment they made great progress and showed that the week's work was not in vain. What these new companies need most is a thorough drill in the "school of the soldier." It will teach them to be more steady in ranks and improve their soldierly appearance.

Target practice was held daily from 2 p. m. to 5 p. m.; distance fired 200 yards. The shooting was not very good, on the whole, but some individuals made very creditable scores. Great improvement might be made if the State would purchase for each man 60 rounds of ammunition, to be used at target practice at the annual encamp-

ments, instead of the soldier having to purchase it from his own means, as is now the case. Gallery practice during the winter months would also be of great benefit to many men who have not had practice at the regular target range.

Discipline in camp was fairly maintained. Guard duty was well performed. Police of the camp was good. Each company purchased its own supplies through a non-commissioned officer, and the tables were abundantly furnished with most excellent food, which had to be paid for by the men out of their meager salary. All officers messed together.

Uniform.—The regiment has not yet supplied itself with the new uniform which has been adopted, and which differs but little, except in buttons, from that now worn by the soldiers of the regular Army. All the companies, except H (Goodrich's), had a uniform. It is to be hoped, however, that this will be remedied by the next annual encampment, and that the entire regiment will be uniformed alike, which will enable them to present a much better appearance as soldiers.

On Sunday, July 15, I made a thorough inspection of the command. There was present at inspection all the field officers and 325 company officers and enlisted men. This does not include a camp-guard, which was inspected separately, consisting of 3 officers and 35 enlisted men, making a grand total of 375 inspected and for duty. The material of which this regiment is composed, both rank and file, is very good indeed. The majority of the men are young and present a fine physical appearance, and all seemed anxious to become acquainted with their duties as soldiers. The guns are of different caliber; some have been in use for several years They were not found, as a rule, in as good and clean condition as they might have been, with the exception of Companies C (Hackley's) and I (Donahower's). The former company, I understand, has a good armory, however, which all the others do not possess, and in fact some of the captains informed me that some of their men carried their guns home with them. This is not as it should be.

The Emmet Light Artillery, of Saint Paul, Captain MacCarthy commanding, consisting of 3 officers and 27 men, was not inspected. This is an excellent body of men, ably commanded, and presents a very soldierly appearance. It is to be regretted, however, that they did not have more men out for their annual encampment; but the captain informs me that many of them were threatened with discharge by their employers in case they persisted in going into camp.

As you requested me to make any recommendation that I thought proper, I would respectfully submit the following:

1st. That all the old rifles now on hand of the .50 caliber be turned in and replaced by the .45 caliber, with "safety-notch;" that captains of companies see that the arms are properly cared for, and, if possible, an armory be provided for each company.

2d. That both officers and men be required to pass a physical examination before they are accepted in the service of the State.

3d. That but one place of encampment be used for all troops at the annual encampment. This will save the trouble and expense of shipping camp equipage from one encampment to another.

4th. That before going to their next annual encampment the Articles of War (or as much of them as relates to a soldier's duty, and by which all soldiers are governed when in the service of their country) be read to each company.

5th. That some dress hat be adopted for all mounted officers.

I am, governor, very respectfully, your obedient servant,

GAINES LAWSON,
Captain, Twenty-fifth Infantry.

His Excellency L. F. HUBBARD,
Governor of Minnesota.

FORT SNELLING, MINN., *July* 31, 1883.

GOVERNOR: You having requested that an officer of the Army be detailed to remain in camp with the First Regiment during their annual encampment at White Bear Lake, and having been detailed for that purpose by Special Orders No. 123, headquarters Department of Dakota, dated July 17, 1883, I have the honor to submit the following report as my observation while in camp:

Arriving in camp July 20, and remaining until July 26, I had every opportunity to observe the drill and routine of the camp. The only troops encamped at White Bear were the First Regiment Minnesota National Guard, Col. W. B. Bend, commanding—a fine tactician, and an officer of great experience in the National Guard of New York, and one in every way, so far as I could judge, capable of performing the duties of his office.

The company drills were quite good, with a tendency among the new companies to lose distance. Five companies of this regiment have been organized since the last

annual encampment, and some of them quite recently. The battalion drills were conducted by Colonel Bend in person, and were very creditable. Some of the companies of this regiment present the appearance of veterans, both in their drill and deportment in camp. The new companies of the regiment were given an extra battalion drill, which proved of great benefit, and before the encampment was broken up all showed marked improvement in drill, and many regretted that they could not remain longer, where all had been benefited by their stay in camp.

The formal inspection of the regiment was made by Colonel Van Cleve, of the governor's staff. There were present at inspection 462 officers and men. But one company practiced at the target range, Company D, Captain Bean, and some men of this company made very good scores, the men purchasing their own ammunition. The arms of the command were, on the whole, in good order; two companies were armed with the Springfield rifle, caliber .50, and the remainder with the Springfield rifle, caliber .45; some with and some without the "safety-notch." All the companies have good armories.

Clothing.—The regiment is all uniformed alike, which adds much to their military appearance.

Discipline was well maintained and guard duty well performed. There were two "guard mounts" daily, which gave each officer and enlisted man an opportunity to become familiar with guard duty; in other words, the guard was relieved every twelve instead of twenty-four hours, which I consider an excellent idea for a week's encampment.

I would most respectfully suggest that the same recommendations as were made in regard to the New Ulm encampment be applied to this regiment, except that which refers to armories.

I am, governor, very respectfully, your obedient servant,

GAINES LAWSON,
Captain, Twenty-fifth Infantry.

His Excellency L. F. HUBBARD,
Governor of Minnesota.

FORT WAYNE, MICH., *September* 25, 1883.

SIR: In compliance with paragraph 1, Special Orders No. 159, Department of the East, August 25, 1883, I have the honor to submit the following as the result of my observations while at the camp of the Second Brigade Illinois National Guard:

The camp was in the suburbs of Springfield, Ill.—was called Camp Logan. The encampment continued for six days, from August 30 to September 4, 1883. Brig. Gen. J. N. Reece was in command of the brigade and camp. He had the following staff: Lieut. Col. C. F. Mills, assistant adjutant-general; Lieut. Col. W. J. Fort, judge-advocate; Lieut. Col. J. M. Rice, inspector of rifle practice; Maj. J. W. Vance, assistant inspector of rifle practice; Maj. T. G. Black, surgeon; Capt. J. C. Bell, acting quartermaster; Capt. W. F. Smith, acting commissary of subsistence; Lieut. B. C. Winston, aide-de-camp, and Lieut. Daniel Stevens, aide-de-camp.

The troops of the brigade in camp were companies B, C, D, E, F, G, H, I, and K, Fifth Regiment, Col. James H. Burkley commanding; Companies A, C, D, E, F, G, H, and I, Sixth Regiment, Col. William Clendennin commanding; Companies C, F, H, I, and K, Seventh Regiment, Col. C. A. W. Fosh commanding; Companies A, B, C, D, E, F, I, and H, Eighth Regiment, Col. Relley M. Smith commanding; Companies A, C, D, E, G, H, I, and K, Ninth Regiment, Col. Louis Krughoff commanding; Battery A, Capt. Edwin Winter commanding; Battery C, Maj. R. M. Woods, commanding, of the First Brigade. There was also present in camp at various times the commander-in-chief, Gov. John M. Hamilton, and his staff; also the commander of the First Brigade, Illinois National Guards, Brig. Gen. Charles Fitzsimons, and his staff.

The ground for the camp was very good, but was not quite ample enough for the encampment of a brigade. The infantry was put in camp according to tactics, with the exception of the company kitchens, which were on the wrong flank; but the ground would not permit of it otherwise. The artillery was not camped strictly in accordance with tactics; but the ground was not large enough for the purpose.

The encampment was for the purpose of instruction, and the time was taken up by company and battalion drills, battalion and brigade dress parades, inspections, reviews, grand guard mountings, and target practice.

Some of the companies drilled very finely and some very poorly. The battalion drills were fair as a whole. The Fifth and Sixth Regiments drilled much the best. Some of the company officers needed instruction; others, again, seemed to be well posted in their duties. The principal mistakes I noticed were that guards were posted too frequently, when not required; dressing the companies to the wrong flank, and

officers facing in the wrong direction when dressing their companies; and frequently the commands not given correctly by the battalion commanders, and a misconception of commands—for instance, marching the battalion by the flank in column of fours, the command was given, "Continue the march, fours, right, march," instead of "Fours right, march," "Guide center." Officers used their swords too much in dressing their companies, instead of keeping them at a carry; and here I might say that at inspection most all the officers brought their swords, when approached by the inspector, to the position prescribed for non-commissioned officers with swords.

The discipline was not as good as it ought to have been; there was too much talking and looking about. The men were not steady enough in the ranks; I noticed this especially at dress parade. Company C, Captain Brinkerhoff, Fifth Regiment; Company C, Captain Reed, Sixth Regiment; and Company H, Captain Vance, Eighth Regiment, were notable exceptions. They drilled finely and showed a good state of discipline. There were other companies which drilled well, but many of them showed a want of instruction and discipline. The setting up drill seemed to have been neglected. The grand guard mounting was not good; it showed want of instruction and discipline. The staff officer who mounted the guard, Major Vance, understood his duties, but he was but one in many. The guard duty was not well done; the sentinels were not thoroughly enough instructed in their duties, and they lounged too much on their posts; there were exceptions to this. Some of the sentinels understood their duties very well, and realized the responsibilities of the position of a sentinel. The police of the camp did not receive the attention it ought to have done.

At inspection I found the arms of many of the companies in bad condition; not properly cleaned, and some rusty. The accouterments and armaments were not properly cleaned. The arms and accouterments of some of the companies were in very good condition. The police about the company streets was good, but about the mess table it was bad. The mess furniture was not in good condition; the knives and forks needed scouring. The companies had plenty of good wholesome food, and well cooked. The dinner of Company C Fifth Regiment, looked very tempting. The company street and tents of Company C, Sixth Regiment, were in the best condition of any of the companies. I witnessed a very fine drill by a section of Captain Winter's Battery A. The target practice was not as effective as it might have been, for want of flags on the range to indicate the direction and strength of the wind.

The staff departments were well managed. The commissary department deserves special mention. It was under the control of Capt. W. F. Smith, an efficient officer. It was provided with the regular Army ration, and everything was of the best. There was ham in lieu of salt pork. A feature of that department was a steam-heating apparatus, by which rations were well cooked for the companies in a short space of time. Good hot soup was ready at all times to be issued to troops upon their arrival in camp. The engine used for furnishing the steam was utilized for lighting the camp by night with electric lights. Captain Bell, the energetic quartermaster, was always on hand and ready for any emergency; he did his work well. The wants of the sick were well looked after by the surgeons, Colonel Dixon, and Major Black.

There was a street parade by the Second Brigade through Springfield, passing in review before the governor; there was also a grand review of the troops by the governor in the camp, and on both occasions the troops marched well and presented a fine appearance.

There was a sham battle during the encampment, the object of which was to see how soon the troops could turn out under arms. They formed promptly and in good time, and executed their maneuvers very creditably.

Finally, I should say that the encampment, as a whole, was a success, and very honorable to the State. The troops would have looked much better and have appeared to a much better advantage had they all been uniformed alike; but the State does not uniform its soldiers. They have to buy their own uniforms, and, as a consequence, there are about as many different uniforms as there are companies, and they present a motley appearance. The State furnishes the arms, pays the expenses of the encampment, and pays a dollar a day to each soldier for the time of the encampment.

There should be a better militia law to make the National Guard effective and what it ought to be. It should be fostered and cared for by the General Government. It should be well armed, well uniformed, and well paid, and the camps of instruction should be for longer periods, and made, what they claim to be, camps of instruction exclusively.

The Second Brigade Illinois National Guard is made up of splendid material. In its ranks are men from every walk in life—lawyers, doctors, ministers, editors, bankers, civil officers, skilled mechanics, laborers, rich and poor. It is a splendid body of men, and by drill and discipline can be made a tower of strength to keep law and order.

In closing, I will say that I was treated with the greatest kindness and utmost consideration by every one. General Reece is a fine officer, well understanding the neces-

sities and responsibilities and requirements of the service. He has a staff of competent and gentlemanly officers. Brig. Gen. I. H. Elliott, adjutant-general of the State, is an officer full of energy and enthusiasm. He was very much interested in the success of the encampment. He met with a sad bereavement during the encampment in the death of his mother, which necessitated his absence from the camp most of the time.

Capt. Edwin Winter, Battery A, wished me to present a request of his, that one, two, or three of his battery might be sent to Fort Leavenworth for instruction. Captain Winter and his battery were highly spoken of to me. He impressed me as a very capable officer, and one who was desirous of making his battery an honor to the National Guard.

Very respectfully, your obedient servant,

J. A. P. HAMPSON,
Captain, Tenth Infantry.

ADJUTANT-GENERAL UNITED STATES ARMY.

REPORT OF THE JUDGE-ADVOCATE-GENERAL.

REPORT

OF

THE JUDGE-ADVOCATE-GENERAL.

WAR DEPARTMENT,
BUREAU OF MILITARY JUSTICE,
Washington, D. C., October 1, 1883.

SIR: In compliance with instructions contained in your letter of the 21st of September, 1883, I have the honor to submit the following report of the business of this Bureau for the year ending September 30, 1883:

Number of records of trials by general courts-martial received, revised, and recorded	1,985
Being an increase of 131 over last year.	
Number of reports and opinions rendered upon proceedings of courts-martial and miscellaneous questions of law	1,487
Being an increase of 596 over last year.	
Number of transcripts of proceedings of courts-martial furnished the Commissioner of Pensions and the Second Auditor of the Treasury	511
Number of copies of records furnished to parties under the one hundred and fourteenth Article of War	119

The number of records of garrison and regimental courts-martial received, examined, and filed at department headquarters is enumerated as follows:

Department of Arizona	531
Department of California	628
Department of the Columbia (no report received)	
Department of Dakota	1,379
Department of the East	1,055
Department of the Missouri	2,175
Department of the Platte	1,398
Department of the South	316
Department of Texas	922
Total	8,404

In my annual report of 1881 it was remarked:

The seventy-second Article of War should be amended by expressly authorizing the President of the United States and colonels commanding separate departments to appoint general courts-martial whenever necessary.

By Article 38 of the Rules and Articles for the Government of the Navy the President may appoint general courts-martial for the Navy whenever necessary.

So in maintaining the discipline of the Army like power should be conferred upon him by the Articles of War. Colonels are sometimes placed in command of separate departments according to brevet rank of brigadier or major general. In view of the fact that there are now a great many colonels who have not the brevet rank of brigadier or major general, and that the number having such brevet rank is constantly diminishing, and that colonels may necessarily be called upon to command departments, the seventy-second Article should be amended as indicated; otherwise colonels in command of departments not having brevet rank will be unable to properly enforce the discipline of their departments in view of the restrictions contained in that article:

By the seventy-second Article of War it is provided that—

Any general officer commanding the Army of the United States, a separate army, or a separate department, shall be competent to appoint a general court-martial, eith-

in time of peace or in time of war. But when any such commander is the accuser or prosecutor of any officer under his command the court shall be appointed by the President, and its proceedings and sentence shall be sent directly to the Secretary of War, by whom they shall be laid before the President for his approval or orders in the case.

This is the only provision of the written law conferring authority on the President to appoint a court-martial, nor has he authority by any statute to require any other official to do so in his name. If, then, he does not possess this authority by the express provisions of the Articles of War does he possess it by virtue of his constitutional office as Commander-in-Chief of the Army?

The general rule is that English statutes passed before the Revolution and in amendment of the common law, are to be assumed as part of the common law of the Colonies. In this point of view the English law, except when it is contradicted by or is incompatible with our constitutional or statute law, our judicial decisions, or the spirit of our institutions, has come to be recognized as law in nearly all the States of the Union. But there is no principle of the common law which pervades the Union and has the force and authority of law except such as is embodied in the Constitution and laws of the United States. Still we have to go to the common law as the suggestive if not the authoritative source of many doctrines of the law—the meaning of its terms—and this applies to military courts. (See 6 Opinions, p. 204; Van Ness *vs.* Packard, 2 Peters, p. 144; Wheaton *vs.* Peters, 8 Peters, p. 591.)

In time of peace the common law of England knew of no distinction between a citizen and a soldier; so that if the soldier deserted he could not be punished. If he struck his officer he was only liable to indictment for assault, and it was held that although the King may by his prerogative enlist soldiers even in time of peace, still if there was no statute passed to punish mutiny and subject them to a particular discipline they could not be punished for any military offense and were only amenable to the same laws as the rest of the King's subjects. (Macaulay's History of England, Vol. I, p. 296; Vol. II, p. 274; Lord Campbell's Chief Justices, Vol. II, p. 91.) Hence the authority of Parliament became necessary for the maintenance of military discipline. Statute 1, William and Mary, ch. 5, A. D. 1689, known as the first mutiny act, granted to the Crown for the first time authority to "cause courts-martial to be appointed to punish desertion, mutiny, or sedition among the troops authorized to be continued and raised for the safety of the kingdom," &c.

The mutiny act, with the provisions it now contains, was therefore essential for the government and establishment of the army.

The great charter of King John had made the people of England freemen. It protected them from trial save by those who knew the law of the realm and meant duly to observe it. (See Creasy on the Constitution.) It was within the prerogatives of the Crown to constitute courts of justice to act within the known and prescribed limits of the common law of the realm; but the Crown had no power to set up a court for the declared purpose of judging its subjects by other rules, and thereby of awarding them punishments extending to life, limb, or liberty. (See Chitty's Prerogatives, p. 75; 1 Clode's Military Forces of the Crown, pp. 56 and 76.)

Each of the mutiny acts, from the first to the last, recites in the preamble, with but slight variation of language, that whereas the raising or keeping a standing army within the United Kingdom in time of peace, unless it be with the consent of Parliament, is against law; and whereas no man can be forejudged of life or limb, or subjected in time *of* peace to any kind of punishment within this realm by martial law, or

in any other manner than by the judgment of his peers and according to the known and established laws, yet, nevertheless, it being requisite for the retaining of all the before-mentioned forces and other persons subject to military law in their duty that an exact discipline be observed, and that persons belonging to said forces who mutiny or stir up sedition or desert Her Majesty's service, or are guilty of crimes and offenses to the prejudice of good order and military discipline, be brought to a more exemplary and speedy punishment than the usual forms of law will allow.

The act then provides:

A general court-martial shall be convened by Her Majesty or some officer deriving authority to convene a general court-martial immediately or mediately from Her Majesty.

By the Constitution of the United States it is provided that "the President shall be Commander-in-Chief of the Army and Navy of the United States." (Article 2, section 2.) By the same instrument it is provided that Congress shall have power "to make rules for the government and regulation of the land and naval forces." (Article 1, section 8.)

By the common law of England, as we have seen, it is the undoubted prerogative of the Crown to command the army of the kingdom; so it is the undoubted right and privilege of Parliament to make rules and regulations for the government of the Army, the constitution of courts-martial, &c. Therefore, as the constitution of courts-martial is not in England an attribute of the power of command, independent of the authority of statute, it should not be deemed to be so with us, where the functions of government are kept separate and distinct in three departments.

The power of command in this sense means no more than that the President shall execute the laws enacted for the Army. It does not mean that he may make laws for its government and regulation in any case not provided for by the authority competent to legislate.

In view, however, of the oath of members of courts-martial as prescribed by the eighty-fourth Article of War, namely, that "if any doubt should arise not explained by said articles, then [to try and determine the case] according to your conscience, the best of your understanding, and the custom of war in like cases," and in view also of the general and indefinite manner in which some of our Articles of War are framed, it has been assumed by some that a kind of common-law jurisdiction underlies our Articles of War. In other words, that there is something in the nature of a *paterfamilias* in our military system. But it is well established that we have not under our Federal Government any common law as a source of jurisdiction; but when an authority is given the nature and extent of that authority and the mode in which it should be exercised must be regulated by the rules of the common law, under the correction of the Constitution and statutes of the United States. Major-General Vans Kennedy, in his Treatise on Military Law, says (p. 12):

I may observe in particular that my former remarks on the principles of military law depended upon a supposition that there was a custom of war from which these principles were derived. But fifteen years' experience of the duties belonging to the situation of the Judge-Advocate-General of an Army of thirty-five thousand men has convinced me that such a notion was completely erroneous. * * * I more distinctly perceived that the practice of military law could never become fixed unless it at all times conformed to that of the criminal law so far as the peculiar constitution of courts-martial would admit of.

As the Articles of War provide for the trial and punishment by courts-martial of crimes and offenses of a purely military nature, as well as of

crimes and offenses that are committed against society at large, the oath of a member of a court-martial is made sufficiently broad to comprehend every crime and offense contemplated by the Articles of War.

The custom of war would apply to the crimes of being a spy, compelling a surrender, relieving the enemy, corresponding with the enemy, &c., in the same manner that the common law would apply to the crimes of murder, manslaughter, assaults, frauds, and forgeries, &c., as contained in Articles of War 58 and 60. In short, when the Articles of War mention a crime or offense and do not define it, we go to the common law of the land or to the custom of war in like cases to ascertain what it is, and determine it accordingly; and plainly this is the true meaning of the phrases referred to in the oath of members of courts-martial.

O'Brien, in his work on American Military Laws, page 32, says:

> In the first place, as Congress has the exclusive power of constituting military courts it can declare how these courts are to be organized, their jurisdiction, by whom and in what manner they are to be ordered, of whom they shall consist, their forms of proceeding, &c. In fine, Congress has full and absolute power in all things pertaining to military tribunals, and the President can in no way interfere with matters relating to these tribunals except as far as he is expressly authorized.

On the same subject Attorney-General Crittenden, (5 Op., p. 509) says:

> It follows from the exclusive power of Congress over the subject that no one can have any authority either to convene a court-martial or to affirm or disaffirm its decision unless it can be shown that such authority has been delegated by Congress.

It follows, therefore, that the President is not authorized to appoint courts-martial by virtue of his office as Commander-in-Chief of the Army, and under existing law he may only do so in the contingency mentioned in the seventy-second Article of War.

By the act of March 3, 1883, the assignment of officers to duty or command according to brevet rank can only be made when actually engaged in hostilities. The contingency mentioned above, therefore, has happened in the case of every colonel in the service, whether holding brevet rank of a higher grade or not. Brevet rank in time of peace can no longer avail in the exercise of command or duty. At the present time one department is commanded by a colonel, and other departments are and have been temporarily in command of colonels, who are thus incapacitated by law to enforce the discipline of their commands through the medium of general courts-martial. Commanders of geographical divisions now assume to appoint general courts-martial in departments commanded by colonels (or, when a general relinquishes command to a colonel, he sometimes appoints a number of courts-martial in advance, so that the colonel may not be embarressd in this regard), but by the terms of the seventy-second Article of War, division commanders are not authorized to appoint general courts-martial. The language of the article is: "Any general officer commanding the Army of the United States, a separate army or separate department shall be competent to appoint a general court-martial, either in time of peace or in time of war." A military geographical division is not comprehended in this language. It is a well-known command, being neither an army nor a department.

In this connection it has been determined that while a colonel commanding a department may not pardon or mitigate the punishment adjudged by a general court-martial appointed by his predecessor (a general officer) in command of the department, yet it is held that he may confirm and execute the sentences of general courts-martial so appointed.

By the Articles of War rank and experience are the criterions in the exercise of authority on the subjects of courts-martial. Upon these principles, as well as by a fair construction of the Articles of War, it cer-

tainly requires equal authority in the officer who approves and confirms sentences of general courts-martial, as in the case of the officer who pardons or mitigates such sentences, and, in reason, the former is the more important duty, for the power to pardon or mitigate is clearly comprehended in the power to confirm and execute.

In my Annual Report for the year 1882 it was remarked:

Most military offenders are not of the felonious or vicious class, the great majority being simply deserters, the offense of desertion in time of peace being merely a breach of contract for personal services, but to which the law attaches criminal liability. Men enlist and find the service to be totally different from what they imagined it to be. They find that nothing substantial can be spared for the assistance of dependent relatives, and at the first favorable opportunity abandon the service. The penalties now usually awarded for desertion—from two to five year's hard labor in prison, with dishonorable discharge, forfeiture of all pay, &c.—are too severe for this class of men.

But while this is so, there are others who are known in the Army as chronic deserters, who are constantly vibrating between the company and the military prison. Such characters should be more severely dealt with and means devised to effectually exclude them from the service. The ordinary offense of desertion in time of peace is, in my judgment, generally too severely punished in our service. The severity of the punishment is clearly not proportioned to the criminal nature of the offense. But why should this be necessary in our Army in time of peace, when recruits can so readily be procured and retained in the service? The great railroad and other corporations in the country, which employ many thousands of men, rarely or never lose their men through desertion, but the employment, though often severe and hazardous, is sought, and when procured retained. Service as a soldier in the Army should be sought by able-bodied and vigorous men as a calling to honor and reward, instead of one from which such men flee by the thousand annually. There must be some defect in our military system, otherwise this would not occur. The pay and allowance of a soldier are about those of the ordinary unskilled laborer. It is believed, however, that a larger number of the artisan class enlist than of the unskilled-labor class, but these soon realize that the pay is insufficient and that the service is not just what was anticipated; hence they abandon it. In my judgment, while the pay as now fixed is ample for some, yet for the greater part of the enlisted men of the Army it is insufficient. I think a measure, if adopted, of a regular increase of pay from year to year for faithful services which at the end of five years' service would make the pay of a soldier, say, twenty-five or thirty dollars per month, would secure to the service trained soldiers, and, all things considered, at a cost greatly less than that incurred by the present system. Again, it is found that men enlist and desert either at the recruiting rendezvous or soon after reaching the depot of recruits. It would be well, therefore, in time of peace, to establish a probationary term for the recruit; that is, upon enlistment and transfer to the depot, if he finds, upon considering his new relation, that he would prefer his discharge, to grant the same upon his paying expenses, &c., incident to his enlistment. This would protect the Government and save the country a citizen. It is believed that a soldier in time of peace, under proper restrictions, should be accorded the right to buy his discharge from the service, by paying the necessary expenses and charges incident to his enlistment and assignment to a regiment. This principle was indeed recognized even in the emergency of a time of war, by the statutes authorizing persons drafted to furnish substitutes. I refer to this only as it relates to the question of discipline through judicial proceedings and of pardons, questions on which this Bureau is required to act under the law and regulations.

The General of the Army, in his last annual report to the Secretary of War, commenting on the subject of desertion, after stating the large number of desertions from the Army and recommending an increase of pay as a preventative, remarked:

The desertion of his comrades in danger is, and ever should be, construed as the basest and most heinous crime possible to a soldier, whereas of late years, under the benign influence of our Bureau of Military Justice, it has grown to be considered as of little more concern than for a laborer to quit his employer without leave or notice.

Certainly nothing that was said in my reports or in the opinions of this Bureau justifies such conclusion. I said in effect that desertion in time of peace, not in time of war or danger, was purely a statutory offense; that the punishment adjudged therefor in certain cases was too severe. No person will deny that desertion in time of war or danger is a heinous crime, being felony at common law, and is usually

punishable with death in our service. I spoke of this offense, however, in my report entirely with reference to a time of peace and while the troops are lying in garrisons. While this Bureau feels complimented at commendations coming from the General, it feels that this mention of it is entirely undeserved, inasmuch as it is based on a total misapprehension of the facts, as will be seen by reference to the reports and opinions of this Bureau on the subject of desertion.

The ever-recurring frequency of desertion in time of peace shows that severity of punishment is no deterrent, in view of the severity of the punishment that has been imposed for that offense in our service with a view to prevent desertion. I ventured to offer a few suggestions which are believed to be sound in principle, and if carried out, desertion in our army, being now so demoralizing and disorganizing, would become a thing comparatively unknown. In this connection attention is invited to the following extract from my report of 1881:

> In reviewing court-martial proceedings, especially in cases of desertion, the prisoner very often is found to complain of ill-treatment at the hands of his superior officers, but more frequently at the hands of non-commissioned officers, and to attribute his desertion to that cause.
>
> This complaint of ill-treatment is found repeated and reiterated in hundreds of trials for desertion, and sometimes for other offenses.
>
> Whether the complaints be true or false, the opportunity which is offered a superior to oppress an inferior is very great, and tends to give credence to the complaint. In the interests of the officer or non-commissioned officer, therefore, if the complaint be false, or in the interests of the soldier and the service if true, some remedy, either by legislation or regulation, should be adopted that would effectually prevent the possibility of an abuse of authority.

A practice has obtained of late of trying enlisted men for trifling absences and neglects before general courts-martial, alleging in the specifications prior convictions of similar or even dissimilar offenses, so that by adding prior minor convictions to an offense trifling in itself the soldier may be dishonorably discharged from the service and confined for a term in the military prison. By the common law regulating crimes and criminal punishments this could not be done, but by modern legislation in England and in some of the States of the Union a heavier punishment is authorized by statute to be inflicted upon conviction of a repetition of the offense. There is, however, no statute of the United States authorizing this to be done by the criminal courts of the United States or by courts-martial, which are essentially criminal courts. This is an instance of attempting to hold the enlisted men of the army together and to their duty by fear of punishment and disgrace. By this means the very best soldiers may be dishonorably discharged and disgraced by omitting through accident or otherwise to promptly attend a few roll-calls in garrison. Several such instances have occurred. But the practice is unnecessary. In nearly all of the Articles of War under which enlisted men are prosecuted and tried the sentences that may be adjudged are left to the discretion of the court. This system of alleging an aggregation of convictions for minor offenses may in some instances succeed in weeding some bad men out of the service, but its tendency will operate more to destroy merit than to uphold good discipline. In any event the matter belongs to Congress for proper legislation, and until that be had the prior and long-established practice ought to be adhered to.

A question as to the limitations to prosecutions (Article 103) for desertion (Artcle 47) has recently been before the United States circuit court, district of California, and the court held that a court-martial has exclusive jurisdiction to try a party duly enlisted in the Army for the

offense of desertion, and that the limitation prescribed for the trial and punishment of that offense by the one hundred and third Article of War is matter of defense, and the tribunal having jurisdiction to try the charge of desertion is the tribunal having jurisdiction to determine whether the bar of the statute has attached or not. The court said:

The fact of desertion being proved, if there is any legal ground or excuse, or exoneration of punishment, that is matter of defense. * * * A desertion having taken place, whether the statute of limitations has run against it and barred punishment, is matter of defense, and must be determined by the same tribunal which tries the charge.

This is the view held by this Bureau, which will be found fully set forth in a number of reports from this office, a few of which are quoted in my Annual Report to the Secretary of War for the year 1882, as follows:

It has been repeatedly held by this Bureau that "the bar of the one hundred and third Article of War is like any other defense before a court-martial. If the prisoner would avail himself of its benefits he must plead and prove it, or he may prove it on the general issue of not guilty without specially pleading it; and if the court believe from the evidence adduced that the offense was committed more than two years before the issuing of the order for the trial, and that the prisoner was amenable to justice within that period, that is if the military authorities by reasonable diligence might have arrested him and brought him to trial within the lapsed period if they would, then the trial should be held to be barred within the meaning of the one hundred and third Article; if otherwise, the plea or showing of the prisoner should be held for naught." (See opinions of this Bureau on this subject of the 2d of August, 1881, and the 19th of January, 1882.)

The bar of the one hundred and third Article of War, therefore [referring to a case cited in my report], being a matter to be established on the trial, will not be inquired into on *habeas corpus*.

The views of this Bureau respecting the burden of proof in showing the exceptions contained in the one hundred and third Article of War are sustained by the rulings of the Supreme Court of the United States in United States *vs.* Cooke (17 Wallace, 168), construing the statute of limitations in criminal prosecutions before the courts of the United States; that statute being substantially similar in its exceptions to those contained in the one hundred and third Article of War, but are denied, it would seem, by Attorney-General Wirt, in a brief opinion rendered in 1820 (1 Opinions, 383), in which he said: "I do not think it is competent to any individual to waive [the limitation] or that a court-martial can proceed to examine into offenses of more than two years' standing previous to the order summoning the court, unless the prosecutor can show that the party accused, by reason of absence or some other manifest impediment, had not been amenable to justice within the time limited by the rule."

Attorney-General Cushing (6 Opinions, 239) seems to admit the correctness of this opinion in a case before him, in which, however, the point was not directly raised; and see it referred to in 13 Opinions, 463, and in 14 Opinions, 267, 268. But it is submitted that the views of Attorney-General Wirt on this subject violate well-established principles of pleading and practice, and virtually nullify the exceptions in the article, especially in cases of desertion. Absence is the only impediment in cases of desertion. If the prosecution be required to follow up and show where the deserter has been during his absence, this would imply that it was within the power of the prosecutor to have brought him to trial within the exact period, and thus the exception would be ignored. Not one deserter in five hundred is found to go beyond the limits of the United States, yet it is believed that the prosecutor in very few of the numerous cases of desertion, where more than two years have elapsed between the desertion and trial thereof, could trace by satisfactory evidence the exact whereabouts of the deserter during absence; and if he undertook to do so the expense of the investigation would be so large as to virtually defeat the ends of justice. How, then, should the matter be ascertained but by the showing of the party accused? He must be the best informed as to his whereabouts during his absence; and upon that showing—giving the prosecutor the right to reply—the court should determine whether or not he was amenable to trial during the lapsed period.

It is maintained that there is no limitation to prosecutions for desertion, but it was further remarked in my report of 1882 that—

It is a fundamental rule that statutes of limitations in criminal matters apply to all cases not expressly excepted.

The forty-eighth Article of War, relied upon as taking the offense of desertion out of the purview of the one hundred and third Article of War, reads as follows: "Every soldier who deserts the service of the United States shall be liable to serve for such period as shall, with the time he may have served previous to his desertion, amount to the full term of his enlistment, and such soldier shall be tried by court-martial and punished, although the term of his enlistment may have elapsed previous to his being apprehended and tried."

The one hundred and third Article reads as follows:

"No person shall be liable to be tried and punished by a general court-martial for any offense which appears to have been committed more than two years before the issuing of the order for such trial, unless, by reason of having absented himself or of some other manifest impediment, he shall not have been amenable to justice within that period."

This article is a re-enactment of the eighty-eighth Article of War of the code of 1806, and manifestly there is no exception therein as to the offense of desertion.

The forty-eighth Article of War is a re-enactment of the eighteenth section of the act of March 16, 1802 (2 Stat., 136), and although this act of 1802 has been successively re-enacted in the acts of 1812-'13 (2 Stat., 673, 796), yet up to the revision of the statutes in 1873 the early act of 1802 was solely relied on for the purpose. (See it embodied in the various editions of the Army Regulations up to 1863.)

The statute, it will be seen, was in force when the eighty-eighth Article of War was adopted, and it may be accepted as certain if it had been intended to except desertion from the universal rule established by that article, it would have been so provided. So far as both articles relate to the offense of desertion, they are laws *in pari materia*, and must be so construed with reference to each other. The first clause of the forty-eighth Article of War relates solely to the punishment that may be inflicted on a deserter, that is, making good lost time, and is not inconsistent with the limitations of the one hundred and third Article. Yet the requirement to make good lost time cannot in strictness be considered as a punishment, but rather a performance of that which the soldier solemnly agreed to perform by his contract of enlistment. The second clause of the forty-eighth Article—providing that the soldier may be tried and punished though his original term of enlistment may have expired—continues his liability to trial beyond the expiration of his original enlistment (unless he shall have in the mean time been amenable to justice), because the article says that he may be tried and punished for the desertion, although the term of his enlistment may have elapsed previous to his being apprehended and tried. Desertion, then, is a continuing offense during the enlistment and beyond its expiration subject to the limitation fixed by the one hundred and third Article.

I have here, as in my report of last year, devoted some attention to this subject, because of the efforts that have been made for the past five years to amend the one hundred and third Article, upon the understanding that it was defective with respect to prosecutions for desertion, and because of the great incongruity of practice and procedure now obtaining before courts-martial in prosecutions for desertion. The views I entertain of the operation of the one hundred and third Article of War obviate, of course, any amendment of it, that article being, in my judgment, ample in its present form to ensure justice and discipline in the Army if the course of procedure above set forth be followed, and which has been approved by the courts of the United States in every instance they have been called upon to consider the subject.

The man in whose case the circuit court for California held the language above quoted having been remanded to the military authorities for trial for desertion, and having been brought before a court-martial for trial, interposed the bar of the one hundred and third Article of War (statute of limitations) as a defense, but the court-martial having declined to accept such defense, its proceedings were for this reason disapproved by the Department commander, who declared in doing so that he followed the principles enunciated by the circuit court in the case above quoted from. (*In re* Arno White, United States circuit court, district of California, before Field, circuit justice, and Sawyer, circuit judge, July 24, 1883.)

The Adjutant-General's Office exercising some supervision over courts-

martial (whether rightfully or not will not here be inquired into), thereupon dispatched the following letter to the department commander:

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE,
Washington, August 25, 1883.

GENERAL: The attention of this office has been called to your General Court-Martial Orders No. 70, current series, promulgating the findings and sentence in the case of Private Arno White, Company K, Eighth Infantry, and particularly to section II. in which the reasons for your disapproval of the proceedings, findings, and sentence are concisely set forth.

Without assuming to reflect in any manner upon your action in this matter, I deem it important that your attention be called to the ruling of the Department regarding the proper construction of the one hundred and third Article of War as laid down by Secretary Cameron under date of January 20, 1877, and confirmed by every succeeding Secretary of War since that date, including the present incumbent, who, it is proper to remark, was aware at the time of confirming the rule of the decision of Judge Choate in the Davidson case, to wit:

"That the old interpretation of the late eighty-eighth, now one hundred and third, of the Rules and Articles of War, under which a deserter might be tried by a court-martial without regard to the length of his absence, notwithstanding the limitation clause in the said article, shall continue to be in force."

If this office understands the language of the United States district court for the district of California in White's case, it is there clearly expressed that questions arising "on the facts" are within the jurisdiction of the military court, and outside the jurisdiction of the civil courts on *habeas corpus*, and on that point its views are reflective of the ruling of the United States circuit court for the southern district of New York in Davidson's case.

However this may be, this office conceives it most material to the proper administration of discipline in the Army that courts-martial should be unaffected by the opinion of civil courts in their action upon the military statute of limitations when introduced in bar of trial, and bound only by their oath, which requires them in the presence of doubt to act according to their conscience, the best of their understanding, and *the custom of war in like cases.*

Attention is also invited in this connection to the fact that the views on this subject as published in the Digest of the Judge-Advocate-General, prepared by Major Winthrop while on duty in that office, are not only not the views of the Department, but were disapproved by the Secretary of War, as being contrary to the best interests of the service. (See also General Orders No. 3, Headquarters of the Army, Adjutant-General's Office, series of 1881.)

I am, general, very respectfully, your obedient servant,

CHAUNCEY MCKEEVER,
Assistant Adjutant-General, in Charge.

Maj. Gen. J. M. SCHOFIELD,
Commanding Department of California, San Francisco, Cal.

Official copy respectfully furnished the Judge Advocate-General of the Army for his information.

This remarkable letter notifies courts-martial that they are the sole and final judges of matters brought before them untrammeled by any ruling or decision of a circuit court of the United States or other judiciary authority.

The conflict of views between the circuit court and the Adjutant-General's Office seems to have brought about the following anomalous procedure in the Department of California in cases of desertion committed more than two years before trial:

HEADQUARTERS DEPARTMENT OF CALIFORNIA,
Presidio of San Francisco, Cal., August 21, 1883.

Respectfully returned to the assistant adjutant-general, Department of California, with the recommendation that the within charge and specification, *as amended*, be approved and referred for trial to a general court-martial.

The desertion in this case is apparently barred from prosecution by the statute of limitations, as interpreted in recent orders.

But a desertion includes a *"continuing offense"* of *absence without leave* committed on every day of the period of the absence. In order that the soldier may not go free of trial and punishment if guilty, he has therefore been, by direction of the department

commander, charged with an *absence without* leave during a portion (not over two years) of the entire unauthorized absence.

W. WINTHROP,
Judge Advocate.

In my report for the year 1881 it was also remarked:

The ninety-first Article of War provides in certain contingencies for the reading in evidence of the depositions of witnesses before courts-martial in cases not capital. If these depositions were taken at or near the time when the offense was committed, when practicable to do so, directly in the presence of the prisoner, so that he might cross-examine the witness if he would, and to be used in the trial, in the contingency that the case is not capital, and where it is shown to the satisfaction of the court that the witness is dead, or is so ill as not to be able to travel, or if he is kept out of the way by the accused, or is insane, or is residing beyond the limits of the State, Territory, or District in which the court may be ordered to sit, the administration of military justice would be greatly promoted by amending the law accordingly. The importance of this amendment of the law will be seen when it is considered that the territorial jurisdiction of a court-martial is so extended that a military offense committed in Maine may be brought to trial before a court-martial sitting in Oregon, rendering it difficult, if not impossible, at times to obtain the *viva voce* testimony of material witnesses.

To this I would add the further recommendation that when depositions are necessary to be taken on interrogatories at the time of trial, the interrogatories should be addressed to an officer of the Army near the place where the witnesses reside, who should be authorized to take the depositions and to administer oaths for the purpose, returning the depositions when completed to the court. The ninety-first Article of War does not direct before whom depositions shall be taken. A court-martial sitting at a great distance from the place where witnesses are found to reside whose depositions on interrogatories are desired is at a loss and is not in a position to know before whom such depositions may be taken. Commissioned officers are now authorized to administer the oath of enlistment to recruits, and their powers in this respect should be enlarged so that depositions to be used before courts-martial or other military tribunals may be taken before them, with authority to compel the attendance of witnesses and to punish for disobedience of their process. In this connection I would invite attention to a recommendation contained in my annual report for 1881, namely:

The authority conferred upon the judge-advocate of a court-martial by section 1202 of the Revised Statutes, "to issue the like process to compel witnesses to appear and testify which courts of criminal jurisdiction within the State, Territory, or District where such military courts shall be ordered to sit may lawfully issue," should be penally sanctioned. While the judge-advocate may issue the process, there is no statutory authority to punish disobedience thereof. Witnesses not in the military service are now induced to attend solely by reason of a liberal compensation, much exceeding that paid by any criminal court, whether State or national. As a matter of economy, then, if not of justice, power to punish reluctant and disobedient witnesses should be conferred by statute upon courts-martial or upon the judge-advocates thereof.

In my annual report of 1882 it was further remarked:

Large numbers of applications for the mitigation of the sentences of military courts are referred here for report. These applications find their way to this Bureau sometimes direct from the prisoner or his friends or through the Secretary of War or the Adjutant-General. This Bureau makes up a full report in the case from the record of the trial filed therein, stating the nature of the offense, the circumstances connected with its commission, the sentence imposed, and a brief opinion on the merits of the whole case as presented in the application for clemency, and as appears from the record of the trial. This Bureau is then required to transmit its report to the Adjutant-General, who is presumed thereupon to submit it to the Secretary of War. Formerly such reports were submitted direct to the Secretary of War by the Judge-Advocate-General, but latterly the practice has varied and alternated between the Judge-Advocate-General and the Adjutant-General. At one time the Adjutant-General was required to refer such information as the records of his office

contained in the case to the Judge-Advocate-General, who would then report and submit the case for the consideration of the Secretary. This was the more reasonable and logical rule, for the Adjutant-General has merely the custody of the documents evidencing enlistments or engagements to service, while this Bureau has not only these data in the case (which are always established at the trial), but the entire record of the conviction.

It is recommended that the reports of this Bureau, with all accompanying papers and documents, after being acted upon by the Secretary, be returned to this office for file with the record of the court. In most of the cases reported upon, this office is not informed as to the nature of the action finally taken. This office is the repository appointed by law for all proceedings of courts-martial; therefore all subsequent proceedings or action affecting a case should be filed away with the record of proceedings of the court. Both convenience and economy and the prompt dispatch of business demonstrate the propriety of this recommendation.

This Bureau is also called upon to examine and report upon varied classes of claims against the Government, such as claims founded upon services rendered and supplies furnished the Army during the late war, and since, other than quartermaster and commissary's supplies, but occasionally such claims are referred for report to this office; claims on account of organizing, arming, and equipping volunteers and militia during the late war; claims founded on titles to lands embraced within military reservations, &c. Although the act of March 3, 1883, provided for reference to the Court of Claims of a claim or matter involving controverted questions of fact or law, still it is always a question to ascertain and determine if a claim involve such issues, so that the settlement of just claims may not be unnecessarily delayed.

The clerical force allowed this office during the past two years is entirely inadequate to perform the duties assigned to it. While the clerical force in other Bureaus and offices of the War Department has been increased, the force of this office has been decreased, not alone in clerks of the higher order of attainments, but in copyists; and when sickness and necessary absence of clerks are considered, the remark contained in my last report is proper to be here repeated, namely:

Of the force of clerks estimated for—over and above the small force allowed in the past fiscal year—to take the place of two Judge-Advocates relieved and assigned to duty in the departments, and to assist in claims and pension searches, &c., but one clerk of class 1 was allowed, and the three copyists hitherto employed in this Bureau were reduced in number to one. The consequence is that work now in the office, which ought to be attended to within a reasonable time must be delayed indefinitely. Applications for copies of records, some of an urgent nature, now awaiting attention, would require the employment of three clerks for more than six months, even if no more applications for copies were received in the mean time. With but one copyist to do this work the inconvenience to parties is apparent.

It is earnestly requested that the force of clerks estimated for this office for the ensuing fiscal year, being that allowed it by the general law (section 215 of the Revised Statutes, and page 46, paragraph 23, of the Supplement to the Revised Statutes), will receive your earnest recommendation to Congress, and be allowed.

It is also recommended that authority be given for the employment of special copyists in this office, to be compensated by the folios copied, as heretofore.

The apartments assigned to this office have for some time been very much crowded, and recently they have been rendered more so. The room which was occupied by myself was taken during my temporary absence and assigned to the Chief of Ordnance. An examination of the

Ordnance Office would show that that office is not any more in immediate need of office room than is this office. Both offices have for years occupied adjacent apartments. The mass of records now received for file in this office it is believed is more voluminous and bulky than that received in the Ordnance Office or any other Bureau of the War Department, thus requiring a constantly increasing space, and any decrease of such space necessarily causes crowding and inconvenience.

The officers of the corps of Judge-Advocates are stationed as follows:

Maj. Guido N. Lieber, on duty in this Bureau.

Maj. William Winthrop, Military Division of the Pacific and Department of California, Presidio of San Francisco, Cal.

Maj. H. B. Burnham, Headquarters Department of the Platte, Omaha, Nebr.

Maj. Thomas F. Barr, in the office of the Secretary of War.

Maj. Herbert P. Curtis, professor of law, Military Academy, West Point, N. Y.

Maj. Henry Goodfellow, Headqnarters Department of the Missouri, Fort Leavenworth, Kans.

Maj. A. B. Gardner, Headquarters Division of the Atlantic and Department of the East, Governor's Island, New York Harbor.

Extracts from the reports of Judge-Advocates of departments and of officers acting and performing the duties of those officers, embodying recommendations on various matters on the subject of the administration of military justice, are hereto appended, and with this report are respectfully submitted.

D. G. SWAIM,
Judge-Advocate-General.

Hon. ROBERT T. LINCOLN,
Secretary of War.

Extract from the report of Maj. W. Winthrop, Judge-Advocate, Military Division of the Pacific and Department of California.

I have no remark to add except that it is most desirable that the sum of $100 be furnished this office for the purchase of a share in the public law library of San Francisco, known as the "San Francisco Law Library Association." Occasions for consulting this library have frequently arisen in the course of the performance of my duties as Judge-Advocate of this division, but my membership of the bar of California does not authorize me to use the library without payment of the price of a share. The sum thus expended would be far more useful to the Judge-Advocate's office here than the same, or a larger, amount allowed for the purchase of law books. As for myself, indeed, I should require no more law books whatever for the office, if I were thus invested with the right to use the library.

Extract from the report of Maj. H. B. Burnham, Judge-Advocate, Department of the Platte.

Attention is respectfully invited to the recommendations attached to my report for 1882 (which are renewed), relative to:

1st. Desirability of enactments vesting military courts with the power to bring to trial, persons in the military service, charged with the crime of murder.

2d. That suitable laws or orders should be made by superior authority defining and governing the duties of Judge-Advocates at Division and Department Headquarters.

3d. That annual appropriations are very desirable, to furnish the Judge-Advocates at Division and Department Headquarters, the necessary legal authorities to increase their facilities for examinations of questions arising in their official capacity.

Extract from the report of Maj. Henry Goodfellow, Judge-Advocate Department of the Missouri.

The large number of trials by inferior courts, when compared with the strength of the command, may challenge attention; but it is to be remembered that these trials are only for minor delinquencies, such as missing roll-call, getting drunk, &c., and the large number does not necessarily represent the number of delinquents, as the same men are often repeatedly tried in one year for offenses of this kind.

It is highly desirable that some change of law, such as has been proposed and initiated in legislation, should be adopted, by which cases of this class resembling those which in civil life are disposed of at the morning levees of police magistrates, should be triable by the officer second in command, not being the accuser, and disposed of in a summary manner. He might, if thought proper, be required to make notes of the evidence; and his sentence might properly be subject to review and correction by the department commander. A great deal of time and some expense might thus be saved, and without injury to any one.

My observation here has confirmed the impression I have received from an experience of some eighteen years as a staff Judge-Advocate, after several years' previous service in the line, that the Articles of War need revision and simplification, so as to eliminate much that is obsolete and surplus in their provisions. Some of the more prominent subjects for revision might be indicated as follows:

There is no necessity for limiting the hours for the session of general courts-martial, certainly not within the limits of daylight. Sufficient guards are already placed around these proceedings and their results to prevent the mischief of hasty judgment.

It seems to me that the enumeration of offences might be comprehended in two categories, one of capital offenses and one of those less than capital.

I can see no necessity for swearing a court and Judge-Advocate in every case. Judges are sworn but once to the faithful performance of their duties, and if juries are sworn in every case, it is because a new jury is impaneled in each case. Why, when a court is assembled, should not all its members and Judge-Advocate be sworn to do justice according to law and the custom of war, in all things brought before the court? Then in passing upon challenges to the members the court would act under the sanction of an oath. With reference to challenges themselves, might it not be well to allow a certain number of peremptory challenges? Such a rule might often relieve the apprehension of the accused on account of some supposed bias or prejudice arising out of a matter which he might naturally be reluctant to disclose before his judges. If the court assembled consists of thirteen members, four peremptory challenges could be well afforded, together with indefinite challenges for cause, as now.

It seems to me that the procedure of military justice should assimilate more closely to the common law in reference to new trials. In our practice a new trial by court-martial is not granted unless upon the application of the man who is convicted, and whose sentence is subject to disapproval for error in the proceedings, but who desires vindication rather than mere immunity from punishment. Accordingly, the more conscious of guilt the less apt is a man to ask for a new trial. He does not want justice so much as the impunity which the disapproval of his sentence will vouchsafe him. This disapproval may be on account of the rejection by the court of material and competent evidence for the defense. This, before a common-law court, would only at the instance of an accused secure a new trial, in which the prisoner might have the benefit of the rejected testimony, and yet be properly convicted in despite of it. The difference is, that at common law, unless he should apply for a new trial, the case would go to judgment; in the military procedure the reviewing officers would disapprove of the proceedings and the prisoner go free. Some time ago a Judge-Advocate of a court died before he had signed a sentence of dismissal regularly imposed upon an officer; another Judge-Advocate was appointed to sign it, but it was held that this was insufficient, and the convicted officer was retained in the Army. If the law was not misunderstood in this case, it ought to be changed, for why should anyone go unwhipped of justice because a Judge-Advocate happened to die before signing a record? Attorney-General Wirt was of opinion that a man might be again tried after the disapproval of his sentence by the President. He said, (1 Opinions, 241): "It may be observed further that under the laws of the United States, the sentence of a court-martial in case of death or dismission is not perfected until it shall have received the approbation of the President; without his sanction it is no more a perfect sentence than a bill which has passed both Houses of the national Legislature, but which has not yet received the approbation of the President, is an act of Congress. In both cases his approbation is necessary to consummate the measure, and in case of the martial sentence his disapproval *annihilates it;* the case stands as if there had been no trial, and is just as open to an order for a court-martial as it was in the first instance."

This doctrine, however, has not been followed, and over and over again, upon the disapproval of a sentence for irregularity in the proceedings, officers of the Army have

been restored to duty, or sometimes, during the late war, summarily dismissed by the President, in the exercise of the power granted for the purpose by Congress, the guilt of the offender tried being flagrant. In time of peace there is no such remedy for serious mistakes of a court that have been held to necessitate a disapproval of the sentence. A new trial is never thought of. It seems to me that this condition of the law, or of the practice, should be remedied by legislation, and no guilty man should escape through the blunders of a court-martial, unless he shall have been acquitted, for which there is of course no remedy, unless the trial was *coram non judice*.

The frequency of desertion is a subject now prominently in view in the Army, and is receiving much attention from the public at large. As to the most active causes of desertion, I do not think I am able to express any mature opinion or furnish any new light. One cause generally assigned by those who study the question is, the defective system or administration in recruiting. It is manifest that if honest and good men only could be enlisted there would be little or no desertions. To attain this object, as nearly as possible, should be the effort of those intrusted with the duty. It would seem at least that some greater care, than at present, as to physical and moral character could be observed. The cases of men of broken-down health and of dissipated habits who come into the Army are too numerous. Recruiting officers appear to be too anxious for quantity rather than quality. A case was yesterday called to my attention of a convict discharged from the military prison for physical disability, manifest in his cadaverous conformation, he being about six feet in height and less than 120 pounds in weight, and who within three months of such discharge re-enlisted, deserted, was captured, tried, and brought to the military prison for confinement under his sentence. Another prisoner who was brought to the prison yesterday came to serve a third term. Quite recently I reported upon the case of a deserter who when first brought to the company, to which he had been assigned, about six months after enlistment, was found suffering from pulmonary consumption. Complaints are constantly heard of the class of men enlisted. It may be that they are the best that could be got. If they pass a proper medical scrutiny and answer the requirements of regulations, the recruiting officer cannot be blamed, and many doubtless merely enlist to obtain subsistence and transportation to the West,—the mining regions.

Another cause, to which this evil is much attributed, is the employment of soldiers as artisans and laborers, for which the pay of a soldier is inadequate, as the soldiers are constantly reminded by seeing civilian employés working at their side for the high wages now paid for labor.

The business of a soldier requires a vocation. Many men, to whom steady habits of mechanical work are foreign, take a pleasure in the life of a soldier. They have perhaps tired of the trade or art to which they have been brought up, but would be willing to march and fight, and cheerfully bear the exposure and privation of military life, which is perhaps favorable to their physical constitution, while the excitement of war and martial exercises appeal to their imaginations or idiosyncrasy. To take a man, who from such motives, leaves his work-shop to become a soldier, and make him do the same work that he thus abandoned, and at much less wages, naturally breeds discontent. A distinction is to be drawn between proper military work, such as making military roads and erecting temporary huts or cantonments, and the work that belongs more properly to the artisan and mechanic, such as the building and repairing permanent barracks, store-houses, &c. The regulations require all working parties to be subordinated to the instruction and training essential to keep any army in an efficient condition for its main and primary business of war; but it is doubtful whether this regulation is observed as it should be.

The manner of paying soldiers is worthy of consideration in this connection. It is thought by many officers that the fact that a recruit's first earnings are for such a long time absorbed in buying his outfit, tends to make him dissatisfied. It is also the opinion of many, that the payment in such comparatively large sums, at intervals of two months, forms a temptation to excessive gambling and drinking, while if a weekly allowance could be made for current necessities and pocket-money, (to be withheld when abused), and the remainder retained until the expiration of the term of enlistment, a constantly accruing incentive would be held out for fulfillment of the contract of enlistment. This is certainly worthy of consideration. The statistics for the last year show that nearly all the desertions occur in the first two years of the term of five;—over 60 per cent. in the first year and 90 per cent. in the first two years.

One thing is certain,—that every reasonable effort should be made to make the condition of the recruit as comfortable and endurable as possible, and thus make him attached to the service. All complaints, not trivial on their face, should be heard and examined, and when ascertained to be well founded their causes should be removed.

But the part of the question with which we have most concern is its punitive relations. In order that these may be wisely considered all disposition to extenuate or obscure the magnitude of the crime should be discountenanced. As it is never the policy of this Government to have a large standing army, so much more is it im-

portant that our small one,—maintained as a national police and nucleus for the large forces required in war,—should be kept to the utmost possible efficiency. Desertion saps the very life of an army. The deserter's crime involves a violation of the oath of enlistment and a fraudulent breach of faith.

Yet, notwithstanding the gravity of the crime, nothing in the nature of punishment could be more humane and merciful to deserters than the treatment of them in the military prison here. They are well clothed, fed, and lodged, and are not too hard worked, while their personal cleanliness and moral and intellectual improvement is not lost sight of. The ordinary punishment inflicted consists only in the restraint to which they are subjected and the labor they do without pay. This restraint and labor inculcates in them habits of industry and sobriety. The discipline of the prison is quite mild, as restricted by statute and regulations. I think that the term of imprisonment imposed by sentence (subject, of course, as now, to the reviewing officer's power to pardon and mitigate) should not be less than the unexpired term of the enlistment. Thus a deserter would have to elect between serving out his term in the Army and the probability of serving the same time in prison. His services would then also be a more proportionate compensation to the Government for its loss by the desertion.

In regard to the question of the limitation of the one hundred and third Article of War, I think much of the confusion and conflict of opinion, that has prevailed in reference to this question, is due to a faulty statement of the question at issue. It has been asked why a deserter should be excluded from the limitation any more than a mutineer or any other gross offender against the Articles of War? But no one understanding the case, ever intentionally asserted that desertion was any exception to the crimes upon which the statute operated. All that was contended was that under the statute *a fugitive from justice*, whether guilty of desertion or any other crime, was always excepted from its benefits until he should surrender or be apprehended. A deserter who should be detained two years after his capture or surrender could not be afterward tried. The words of exception are; "*Unless, by reason of absence or other manifest impediment, he has not been amenable to justice;*"—that is, to the operation of justice by trial, judgment, and execution. Now, no man can be tried by a court-martial until he is arraigned in person before it, and therefore, following the analogy of the Federal law in relation to civilian offenders, absence, flight, or concealment, defeat, during their pendency, the operation of the statute. The recent decisions of the Federal judiciary in New York and California, taken together, determine nothing, except that the United States courts will not take a case of desertion out of the hands of a court-martial, and that the benefit of the statute of limitations is matter of defense. The naked question, recently raised, that flight or absence from service is not *per se* a manifest impediment in the meaning of the one hundred and third Article of War, has never been judicially passed upon. Under the ruling that the application of the statute is matter of defense, the burden of proof is upon the prisoner to show that he *has* been amenable to justice, or, in other words, in the hands, or within the manifest reach of the military authorities, during the period for which his trial has been deferred. In attempting this line of defense, it does not lie with the prisoner to say to the Government, "You should have been more diligent in searching for me." No man can take such advantage of his own wrong.

It may be questioned whether the period of two years is not too short for the statute in its general operation, irrespective of the question of absence. In several recent noted cases of fraud and embezzlement, the earlier offenses have been concealed by the offender for more than two years. I should think it would be a sufficient amendment of the statute to make it say that, "no person in the military service shall be tried more than two years after the discovery of his offense, unless he shall have absented himself from his station or fled from justice, when he may be tried at any time within two years after his capture and return to the custody of the proper authority." The term "fled" or "fleeing from justice" has received judicial interpretation in the Federal courts, and cannot be misunderstood.

It is important that this question in relation to deserters should be set at rest, because some men may have received impressions that if they desert and elude pursuit and capture for two years, they may go scot-free; in which they should be fully undeceived.

The certainty of punishment is well known to be more efficient than its severity as a deterrent from crime. Every possible effort should therefore be made to detect and arrest deserters. At the same time, it is not to be forgotten, the punishment must be adequate in order to be effective.

It would seem that there should be some additional provision against the enlistment of deserters who have been dishonorably discharged from the Army. These men, if sent to the military prison, are afforded an opportunity to redeem their character and obtain authority to re-enlist, with the consent of any captain who is willing to enlist them, knowing their history. A man who does not obtain this, if he fraud-

ulently re-enlists, is generally an element of demoralization until he again deserts, as he is probably prone to do.

It might help the matter to have photographs of all recruits taken on enlistment, with a full description of their persons, so that when they desert these photographs and descriptions could be furnished to every recruiting officer. The same means would facilitate the arrest of the deserters.

As it is now, in an average enlisted strength in the Department of the Missouri, during the year, of some 4,500, the statistics show about 423 desertions during the last nine months, (since the reports of Boards of Survey have been received, or at the rate of over 12 per cent. per annum of the whole force,) while the records for a year show about 123 trials for desertion, or a little more than 20 per cent. of the number of deserters. I inclose the statistics of deserters as compiled from the records of Boards of Survey, for more accurate analysis, if desired.

There were five trials of officers in the Department during the last year, but happily only one case was found worthy of the extreme sentence of dismissal;—that of an officer who had negotiated more than one set of pay accounts for one year. The evidence in that case confirmed an opinion which I have long entertained, that some additional provision should be made by law or by measures to enforce the present regulations against the offense of selling claims to pay in advance, and thus, it may be, anticipating a salary for months ahead. An officer who is thus embarrassed by the alienation of his pay for months ahead, is poorly equipped for the discharge of his duty, when his means of subsistence are thus absorbed and his mind perhaps perplexed by his necessities.

If it should be desired to effect this reform thoroughly, it might be well to consider the propriety of allowing an officer to draw his salary a month or two in advance, when he is ordered to make a change of station involving, as is often the case, an expenditure greatly in excess of his allowance of mileage or transportation.

Extract from the report of Maj. A. B. Gardner, Judge-Advocate, Department of the East.

Attention is respectfully invited to the propriety of endeavoring to obtain Congressional legislation—

1st. To enable commanding officers of posts, camps, and garrisons, to act as summary courts-martial in cases of minor offenses of enlisted men, not exceeding a forfeiture of $5 or confinement at hard labor for more than ten days, an *abstract* as to the charge, witnesses examined, and finding and sentence to be kept and forwarded for revision the same as garrison court-martial cases. There would seem to be no weighty reason why four officers shall be constantly taken from other duties to sit as a garrison court in such trifling cases.

2d. To enable Army Boards of Survey when investigating as to accountability for public property, and officers of the Inspector-General's Department, and Judge-Advocates of the Army, when conducting any inquiry connected with the military service, to administer oaths and take depositions.

3d. As to the propriety of bringing to the notice of Congress, through the regular military channels, the status of the corps of Judge-Advocates, with a view to appropriate legislation which will give them moderate promotion in Army rank and pay for *length* of service in the capacity of Judge-Advocates, in like manner as in the corps of professors at the United States Military Academy—under section 1336 U. S. Revised Statutes.

In every other department of the Government, military, naval, or civil, the inducement of promotion is presented.

The nature of the duties of Judge-Advocates cause them to serve only in the War Department, or with the superior general officers of the Army, and an undeserved inequality in rank is found in such service not commensurate with the importance of the office.

Extract from the report of Capt. C. S. Roberts, Seventeenth Infantry, Acting Judge-Advocate Department of Arizona.

Garrison courts-martial are now composed of three officers and a Judge-Advocate; a general court-martial is authorized to proceed with the trial of any case properly referred to it, with a minimum number of five officers and a Judge-Advocate, no matter how grave the offense of the accused to be tried.

The oath prescribed by the eighty-fourth Article of War is the same for all courts-martial.

The eighty-third Article of War prevents garrison courts-martial from inflicting greater punishment than one month's confinement and one month's loss of pay.

As the effect of punishment is the more beneficial as it follows closer to the crime or

offense for which it is imposed, both as a warning to the evilly disposed and as a punishment for crime, I respectfully recommend legislation by which the powers of garrison courts-martial may be increased, by allowing them to inflict a fine, not exceeding three months' pay, and imprisonment, or put to hard labor for a period not exceeding three months.

By this increase in the character of its sentence, garrison courts-martial would have jurisdiction of a class of offenses, which, by reason of want of power to punish, have hitherto been tried by general courts.

Such an increase in the powers of garrison courts-martial, would, in my judgment, be for the interest of the service, and would in the majority of cases do away with the necessity which often exists for ordering general courts for trial of offenses under the twentieth, thirty-first, thirty-second, thirty-third, thirty-fourth, and sixty-second Articles of War.

The punishment awarded would be speedier and the expense to the Government much lessened.

Extract from the report of Capt. J. W. Clous, Twenty-fourth Infantry, Acting Judge-Advocate Department of Texas.

My recommendation of the last year in reference to the constitution of garrison courts is reiterated. It is believed that justice in minor cases of breaches of discipline could be more advantageously administered by the officer next in rank to the post commander, than by the present system. Municipal corporations have a prompt and summary way of adjudging violations of their laws and regulations; why greater formality and more cumbersome modes of procedure are necessary under military rule is not apparent. The want of a definite schedule of penalties, sanctioned by law, is much felt. The inequality in punishments, under the present system of garrison courts, is a source of discontent among the enlisted men.

The regulations upon the subject of summoning witnesses are indefinite. The Judge-Advocate is enjoined to summon only those witnesses whose testimony he is satisfied is material and necessary to the ends of justice. The accused, however, in many instances fails to give him any information to enable him to judge of the materiality of the testimony desired; the matter is submitted to the court, which in many cases, without any further inquiry or additional information, orders the witnesses to be summoned, at large expense to the Government, and frequently without adding anything to the cause of justice. For the sake of illustration I beg leave to quote a case recently tried at this place, in which I served as Judge-Advocate. The accused, before trial, asked for seven citizen witnesses, all residing beyond the limits of the State and at distant points, to testify to his character. I offered to admit all he desired to establish by them, and, under Army Regulation 889, refused to summon them without the order of the court. At the first day's session, the accused submitted his application to the court. I repeated my offer to admit the matter sought to be established, and, in the event of its non acceptance, suggested to the court that the testimony be taken by interrogatories,—but without avail. Neither my offer nor my suggestion was acted upon. The witnesses were ordered to be summoned, and testified to no other matter than the character of the accused as it existed, not at the time of the commission of the offenses charged against him, but as it had been from 1861 to 1876. The United States had to pay these witnesses $1,120.10.

Except in case of application by the accused for postponement, on the ground of the absence of witnesses, there are no positive regulations governing courts in the summoning of witnesses. It is claimed that the rules under which the Judge-Advocate is permitted to summon witnesses cannot, by analogy, be made to govern courts. In the practice in the United States courts, the summoning of witnesses on behalf of the accused and at the expense of the United States, is regulated by section 878 of the Revised Statutes; and that portion thereof which prescribes that the accused shall set forth, under his oath, the names of the witnesses whose evidence is material to his defense, that he cannot safely go to trial without them, and what he expects to prove by each of them, might, without detriment to the ends of justice, be made the rule in the administration of justice before military courts. This would give the Judge-Advocate an opportunity to admit any matter sought to be established by the defense which is not disputed by the prosecution, and enable the court to judge of the necessity of the witnesses, and thus save the United States many useless expenditures.

The Rules and Articles of War, in so far as they relate to criminal procedure; the definition of, and punishment for crimes, have not been materially altered since their original enactment in 1776. The defects and omissions found in them have been pointed out, and their revision urged by abler pens than mine, and I simply desire by my reference to this subject, to add my humble recommendation for reform in this respect.

REPORT OF THE QUARTERMASTER-GENERAL.

REPORT

OF

THE QUARTERMASTER-GENERAL.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, October 6, 1883.

SIR: I have the honor to submit the annual report of the operations of the Quartermaster's Department during the fiscal year ending June 30, 1883.

The balance in Treasury to credit of the Quartermaster's Department at end of June 30, 1882, was, as by last report		$1,182,239 65
Appropriations for the fiscal year for service of the Quartermaster's Department were, in gross (act June 30, 1882)		11,375,000 00
Appropriations for deficiences for 1881-'82 and for prior years (act August 5, 1882)		1,189,153 96
Appropriations for deficiencies for 1882-'83 and for prior years (act March 3, 1883)		317,867 78
Appropriations for service of the Quartermaster's Department (acts July 3, 11, and August 7, 1882)		424,825 21
Amounts deposited to credit of appropriations and received from sales to officers of public property		562,768 94
Total		15,051,855 54
Remittances to disbursing officers have amounted to	$11,862,779 41	
Requisitions to pay settlements made by Treasury and to pay claims and accounts	1,184,757 17	
Transferred under act of August 5, 1882, for payment of salaries of civilians employed in lieu of general service or detailed enlisted men	101,652 50	
Carried to surplus fund, act June 20, 1874	607,387 45	
		13,756,576 53
Leaving balance in Treasury undrawn at end of June 30, 1883		1,295,279 01

Tables accompany this report, giving the amount of the various items of appropriations, remittances, &c., in detail.

The Quartermaster's Department is charged with the duty of providing the means of transportation by land and water for all troops and all material of war, and transports freight for other executive departments when requested to do so, for which the appropriation of the Quartermaster's Department is reimbursed; provides wagons and ambulances and harness, except for cavalry and artillery horses; builds or charters ships, steamers and boats, docks, and wharves; constructs and repairs roads, railways, and bridges; clears out obstructions in rivers and harbors when necessary for military purposes. It provides and distributes clothing, tents, and equipage, fuel, forage, stationery, lumber, straw for bedding for men and animals, and all material for camps and for shelter of troops and stores; furniture for offices and for bar-

racks, such as bunks, benches, chairs, tables, and lockers; heating and cooking stoves for use in public barracks and quarters; tools for mechanics and laborers in the Quartermaster's Department; lights for all military posts and buildings. It builds barracks, quarters, store-houses, and hospitals; provides, by hire or purchase, grounds for military encampments and buildings; supplies periodicals and newspapers, or school-books in lieu of periodicals, if desired, to the post libraries for the use of enlisted men.

During the year over two hundred officers of the line have been performing duty as acting assistant quartermasters, and as such were charged with the responsibility for public property, and most of them with the disbursement of public funds. For this extra accountability of property and money the customary sum allowed acting assistant commissaries of subsistence for care of provisions (under act of July 15, 1870), namely, $100 per annum, should be allowed, and the unjust discrimination against acting assistant quartermasters thus abolished.

At present not only the officers serving in the Quartermaster's Department are required so assume this extra responsibility without pay pertaining properly thereto, but the enlisted men also detailed as clerks to assist them in lieu of civilian ones are now obliged to work without pay "on constant labor of more than ten days." The laborer is worthy of his hire, more especially in this instance, involving no little responsibility and calling for valuable attainments and qualities in the enlisted men.

A lieutenant of the Army detailed to do duty in the Quartermaster's Department and required to become responsible for property, should be furnished with a competent enlisted clerk, and a man who, besides being a clerk, shall have some authority over the enlisted men with whom the officer and his attachés are brought in contact. There is no better nor more economical method thus far devised than that of the appointment of an enlisted man as post quartermaster-sergeant, who shall be *experienced as a clerk in the Quartermaster's Department* and capable of superintending issues of quartermaster's property. The Army has ordnance sergeants, hospital stewards, and commissary sergeants, and should have quartermaster's sergeants, especially *at posts where there is not a regular quartermaster.*

Upon this subject the late distinguished Quartermaster-General M. C. Meigs truly remarks:

> The want of post quartermaster-sergeant still continues to be felt, and I am requested by officers who have the good of the service at heart to again recommend that their appointment be provided for.
>
> The acting assistant quartermaster, who is in charge of the military property of the Quartermaster's Department at any military post, as a rule, leaves the post whenever the garrison is exchanged or removed, and the sudden transfer of property, often of great value, is attended with risk of loss to the officers.
>
> A post quartermaster-sergeant who would remain at the post would be able to save officers and the Government loss which results from such sudden and frequent changes. This care of supplies would prevent useless transportation and wastage. The value of the service of ordnance and commissary sergeants is well established by experience; but the Quartermaster's Department, whose property at military posts generally exceeds in value all others combined, is without these useful non-commissioned officers.

It is recommended that to every permanent post, garrisoned by not less than two companies, a quartermaster-sergeant, selected by examination from such of the enlisted men of the line of the Army as are competent clerks, be appointed by the Secretary of War, at his discretion, on the recommendation of the Quartermaster-General. It is further recommended that one enlisted clerk be allowed each post quartermaster,

who shall be entitled to thirty-five cents extra pay per diem while thus detailed and actually performing the duty of clerk.

In support of these recommendations attention is invited to page 435 of the inspection branch report.

DUTIES OF OFFICERS.

Brig. Gen. Rufus Ingalls, Quartermaster-General, U. S. A., Quartermaster-General's Office.

Lieut. Col. A. J. Perry, deputy quartermaster-general, is on duty in this office in charge of the finance, clothing supply, and inspection branches, and of the examination of officers' accounts and returns.

Lieut. Col. J. G. Chandler, deputy quartermaster-general, is on duty in this office in charge of the transportation, regular supplies, and miscellaneous claims branches.

Maj. B. C. Card, quartermaster, is on duty in this office in charge of the claims branch.

Lieut. Col. R. N. Batchelder, deputy quartermaster-general, is in charge of the general depot of the Quartermaster's Department and office of National Cemeteries at Washington, D. C.

Col. S. B. Holabird, assistant quartermaster-general, U. S. A., is in charge of the general depot of the Quartermaster's Department at Philadelphia, Pa.

Col. C. H. Tompkins, assistant quartermaster-general, is chief quartermaster Military Division of the Missouri, and depot quartermaster at Chicago, Ill.

Col. J. A. Ekin, assistant quartermaster-general, is in charge of the general depot of the Quartermaster's Department at Jeffersonville, Ind.; also disbursing officer of the Quartermaster's Department and in charge of National Cemeteries in Kentucky and Tennessee, at Louisville, Ky.

Col. Rufus Saxton, assistant quartermaster-general, is chief quartermaster Military Division of the Pacific and Department of California, at Presidio of San Francisco, Cal.

Lieut. Col. J. D. Bingham, deputy quartermaster-general, is chief quartermaster Department of the Missouri, at Fort Leavenworth, Kans.

Lieut. Col. Henry C. Hodges, deputy quartermaster-general, is in charge of the general depot of the Quartermaster's Department at New York City.

Lieut. Col. William Myers, deputy quartermaster-general, to October 20, 1882, was on duty as chief quartermaster Department of Dakota, Fort Snelling, Minn. From October 20, 1882, he was on leave of absence on surgeon's certificate until he retired from active service March 15, 1883.

Lieut. Col. Chas. G. Sawtelle, deputy quartermaster-general, is chief quartermaster Military Division of the Atlantic and Department of the East, at Governor's Island, New York Harbor.

Lieut. Col. James J. Dana, deputy quartermaster-general, is chief quartermaster Department of the South, at Newport Barracks, Ky.

Lieut. Col. M. I. Ludington, deputy quartermaster-general, was chief quartermaster Department of the Platte, at Omaha, Nebr., to March 31, 1883. He was on leave of absence from November 19, 1882, until May 15, 1883. From May 16, 1883, he was on temporary duty in the Quartermaster-General's Office.

Maj. James M. Moore, quartermaster, was on duty in office of the Quartermaster-General to May 26, 1883. From May 27, 1883, to May 31, 1883, he was en route to headquarters Department of Dakota, and

from June 1, 1883, chief quartermaster Department of Dakota, at Fort Snelling, Minn.

Maj. Charles A. Reynolds, quartermaster, to October 6, 1882, was awaiting orders. From October 6 to 18, 1882, he was en route to Atlanta, Ga. From October 18, 1882, in charge of National Cemeteries in Georgia and adjoining States, at Atlanta, Ga.

Maj. George B. Dandy, quartermaster, to March 28, 1883, was depot quartermaster at Saint Louis, Mo., and from March 31, 1883, chief quartermaster Department of the Platte, at Omaha, Nebr.

Maj. George H. Weeks, quartermaster, is in charge of general depot of the Quartermaster's Department at San Francisco, Cal.

Maj. William B. Hughes, quartermaster, is on duty in the general depot of the Quartermaster's Department at Philadelphia, Pa., in charge of transportation, &c.

Maj. A. G. Robinson, quartermaster, is disbursing quartermaster district of Montana, Helena, Mont.

Maj. E. D. Baker, quartermaster, was chief quartermaster Department of Columbia, at Vancouver Barracks, and in charge of depot at Vancouver, W. T., to January 25, 1883, when he died.

Maj. J. G. C. Lee, quartermaster, is chief quartermaster Department of Texas; also from January 2, 1883, in charge of depot at San Antonio, Texas.

Maj. James Gilliss, quartermaster, is post quartermaster and quartermaster of Artillery School at Fort Monroe, Va.

Maj. T. J. Eckerson, quartermaster, is depot quartermaster at Boston, Mass.

Maj. A. J. McGonnigle, quartermaster, is chief quartermaster Department of Arizona, Whipple Barracks, Ariz.

Maj. E. B. Grimes, quartermaster, is assistant to chief quartermaster Department of the Missouri, Fort Leavenworth, Kans.

Maj. James W. Scully, quartermaster, to August 5, 1882, was post quartermaster at Fort Thomas, Ariz.; from August 10 to 19, 1882, en route to headquarters Military Division of the Atlantic, and from August 28, 1882, on duty at Fort Adams, R. I., as post quartermaster.

Maj. Charles W. Foster, quartermaster, is depot quartermaster at Baltimore, Md.

INSPECTION BRANCH.

This branch of the office keeps the records and correspondence relating individually to officers of the Quartermaster's Department or to officers doing duty therein, and to clerks and agents and others employed in the Quartermaster's Department, and of those on duty or employed in the Quartermaster General's Office.

Miscellaneous literature, such as Harper's and other magazines, scientific and military journals, newspapers, &c., have been supplied the military post libraries to the value of about $8,750.

One hundred and forty-five thousand and fifty-nine general orders and circulars have been received and 105,773 have been distributed.

The report of the inspection branch of the office shows the existing organization of the Quartermaster's Department in detail and the duties upon which the officers are engaged.

BARRACKS AND QUARTERS.

The construction of 90 new buildings, such as barracks, quarters, stables, storehouses, guard-houses, &c., have been authorized at an es-

timated cost of $147,178. They are at military posts in 9 States and 8 Territories.

Repairs to existing buildings have been authorized at an estimated cost of $452,559.

The expenditures on account of the construction and repairs have been distributed as follows:

The cost of new buildings in Department of the East is stated at	$4,967
Repairs	97,293
Department of the South, new buildings	11,017
Repairs	13,798
Total Division of the Atlantic	127,075
Department of the Missouri, new buildings	9,574
Repairs	136,265
Department of the Platte, new buildings	23,822
Repairs	38,037
Department of Dakota, new buildings	22,896
Repairs	57,407
Department of Texas, new buildings	7,593
Repairs	25,608
Total Division of the Missouri	321,202
Department of California, new buildings	4,473
Repairs	32,443
Department of the Columbia, new buildings	31,990
Repairs	29,344
Department of Arizona, new buildings	30,846
Repairs	22,364
Total Division of the Pacific	151,460

Of the above sum the Secretary of War, under section 1231, Revised Statutes, authorized buildings to be erected or fitted up for school and religious purposes at the following posts:

Fort Trumbull, Conn	$1,136
Fort Walla Walla, Wash	208
Fort Wingate, N. Mex	1,500
Fort Stanton, N. Mex	1,500
Total	4,344

WHARVES.

Improvements of wharves have been authorized at—

Jackson Barracks, La	$4,064
Angel Island, Cal	1,927
Fort Stevens, Oreg	2,164
Willets Point, N. Y	1,120
Fort Barrancas, Fla	1,296
Alcatraz Island, Cal	7,811
Total	18,382

WATER AND SEWERAGE.

Fifty-one thousand eight hundred and fifty-two dollars have been authorized for improving the water supply and system of sewerage at 21 military posts.

SPECIAL PROJECTS AUTHORIZED BY CONGRESS.

For new buildings for officers' quarters at Fort Apache, Ariz	$13,928 44
For replacing the barracks at Fort Leavenworth, Kans., burned February 1, 1882	18,745 77
For completing new barracks at Fort Leavenworth, Kans	47,000 00
For erection of additional officers' quarters at Fort Leavenworth, Kans	41,211 00
For completing the post of Fort Maginnis, Mont	25,000 00
For erection of a quartermaster's and commissary depot building at Saint Paul, Minn	48,500 00

The sundry civil bill of March 3, 1883, granted for the enlarging and construction of such military posts as in the judgment of the Secretary of War he may deem necessary, the sum of $200,000.

The Secretary of War distributed it as follows:

Fort Colville, Wash	$50,000 00
Fort Bliss, Tex	10,000 00
Fort Douglas, Utah	19,000 00
Fort Omaha, Nebr	10,999 10
Fort Bridger, Wyo	33,500 00
Fort Thornburgh, Utah	1,500 90
Fort Huachuca, Ariz., Fort Grant, Ariz., Fort Apache, Ariz	75,000 00
	200,000 00

HOSPITALS.

For the construction and repair of hospital buildings $74,968 have been authorized to be expended as follows:

Department of the Platte	$6,104 00
Department of the Missouri	13,330 00
Department of Dakota	17,408 00
Department of Texas	595 00
Total Division of the Missouri	37,437 00
Department of California	1,211 00
Department of Arizona	8,487 00
Department of Columbia	8,560 00
Total Division of the Pacific	18,258 00
Department of the South	5,897 00
Department of the East	13,376 00
Total Division of the Atlantic	19,273 00

HOSPITAL AT HOT SPRINGS, ARK.

Congress, by act of June 30, 1882, appropriated $100,000 for the erection of an Army hospital at Hot Springs, Ark., upon the United States reservation, which shall be under the direction of the Secretary of War. The law has been complied with so far as the preparation of plans and specifications are concerned, and the work, after advertisement, has been begun. The price agreed to be paid is $86,335, the lowest bid received for the work.

TRANSFER AND SALE OF BUILDINGS.

The sale of 106 buildings located in Maine, Florida, Louisiana, Tennessee, Texas, Wyoming, Utah, and Colorado has been authorized.

The act of April 7, 1882, authorized the Secretary of War to sell the military barracks and the lands upon which they are located in the city

of Savannah, Ga., and in accordance therewith he has ordered the property to be advertised, the sale to take place November 15, 1883. It is appraised at $67,381.88.

The buildings at old Fort Thornburgh have been transferred to the Interior Department, the marine-hospital building at Saint Mark's, Fla., to the Treasury Department, and the buildings at Camp Russell, near Raleigh, N. C., to the State authorities.

MILITARY SITES IN TEXAS.

In 1875 Congress appropriated $25,000 for the purchase of the site of Fort Brown, Texas, and $10,000 for the purchase of the site of Fort Duncan.

The owners of the Fort Brown site declined to sell for the amount appropriated, and the War Department has held since 1880 that the site was of little importance and, so far as known to this office, nothing further has been done in regard to it.

The owner of Fort Duncan also declined to receive the sum appropriated for purchase of his property, and his price has steadily increased until it recently reached some $36,000. The price being considered exorbitant by the War Department, orders have been given for its abandonment.

On April 16, 1880, Congress appropriated $200,000 for acquiring sites and erecting suitable posts in Texas for the protection of the Rio Grande frontier. Under this law, as modified by act of June 30, 1882, the Secretary of War has authorized the purchase of Fort Davis site for $23,500; grounds at San Antonio, $41,742.20; and site at Camp Rice, $2,370. Favorable opinion has been rendered by the Department of Justice in the case of the title to the San Antonio land and for part of the site of Camp Rice. The title papers to Fort Davis have not reached this office.

POST CEMETERIES.

Eight thousand and eighty dollars have been authorized to be expended in care and maintenance of post cemeteries.

FIRES.

The losses by fire during the year have been: One set of officers quarters at Vancouver Barracks, Wash.; a bakery and post trader's building at Fort Maginnis, Mont.; shop and engine building and noncommissioned staff officers' quarters, old, at Fort A. Lincoln, Dak., and a shed and certain quartermaster's property at the Washington depot in this city.

MILITARY RESERVATIONS.

A military reservation was declared by the President at Fort Supply, Ind. Ter., January 17, 1883, boundaries enlarged, and the following reservations were transferred to the Department of the Interior: Fort Benton, Mont., January 5, 1883; Fort Brooke, Fla., January 4, 1883; Fort Larned, Kans., March 26, 1883, and Fort Hall, Idaho, June 11, 1883.

For full particulars in relation to barracks and quarters and accounts attention is respectfully invited to the report herewith of Col. A. J. Perry, assistant quartermaster-general, in charge of those branches.

QUARTERING TROOPS.

In regard to quartering troops, the necessity for so many small and scattered military posts is fast diminishing, inasmuch as the Indians are collected on permanent reservations; at the same time the necessity for larger permanent posts near Indian reservations and frontiers is increasing. For these reasons it will add greatly to the economy of maintenance of troops and to their efficiency if they can be assembled at important points in larger and more permanent garrisons. To do this will require special appropriations from Congress; for that reason several important special estimates have been presented to which attention is respectfully invited.

DAVID'S ISLAND, NEW YORK HARBOR.

The important recruiting depot and training school for recruits at David's Island, near New York City, needs an immediate appropriation to replace old, dilapidated, and unsuitable buildings; the sum of $125,000 or thereabouts is needed to begin the work. It is not necessary to say anything about the importance of this work to any one at all informed upon these great public matters. It is well known to be a work of pressing national necessity.

JEFFERSON BARRACKS, MO.

It has been found that the buildings at Jefferson Barracks, on the Mississippi River, near Saint Louis, which are old and have been long used as barracks, have become extremely unhealthy for the recruits collected there and trained for the Army. If that post is to continue in use for that purpose, it has been represented that new buildings are required to be constructed upon ground hitherto unused, which should be first thoroughly underdrained and then built upon. One hundred thousand dollars will be required to begin the work of rebuilding this post and bringing it into a proper sanitary condition for its continued use as a recruiting depot and training school for young recruits for the Army.

TRANSPORTATION.

Transportation was provided by rail, water, wagon, and stage for 65,166 persons, 6,279 animals, and 118,935 tons of material, costing, as reported, $2,149,051.49, of which $414,908.84 was paid for transportation of persons, $901,663.23 for the transportation of live stock and freight, and $384,322.35 on accounts not strictly chargeable either to passenger or freight transportation, leaving $448,157.07 on outstanding accounts not settled at the close of the fiscal year.

The expenses of military transportation not paid out of the regular appropriation comprise that provided over bonded Pacific railroads, in value $845,144.46, which is credited at the Treasury Department on the debts of those railroads, and that provided over land grant railroads, to which 50 per centum of tariff rates is paid under act of Congress of June 30, 1882, making special appropriation of $125,000 for that purpose, all of which will probably be needed to pay for such service.

The larger movement of troops were:

Third Artillery.—Company F, from Department of the South to Department of Texas.

Fourth Artillery.—Company F, from Department of the East to Department of Dakota.

Fifth Artillery.—Company D, from Department of the East to Department of the Platte.

Seventh Infantry.—Headquarters and ten companies from Department of Dakota to the Department of the Platte, costing $27,394.25.

Twelfth Infantry.—Headquarters and ten companies from Department of Arizona to Department of the East, costing $47,443.57.

Fifteenth Infantry.—Headquarters and ten companies from Department of the Missouri to Department of Dakota, costing $35,801.47.

Twenty-second Infantry.—Headquarters and ten companies from Department of Texas to Department of the Missouri, costing $37,653.82.

RAILROAD TRANSPORTATION.

Thirty thousand two hundred persons, 5,459 animals, and 76,346 tons of material were transported by rail at a cost to the appropriation for transportation of the Army of $967,031.30; $845,144.46 was also credited on account of indebtedness to bonded Pacific railroads, and $125,000 paid out of special appropriation to land-grant railroads, making the total cost of railroad transportation furnished the Quartermaster's Department during the year $1,937,175.76.

BONDED PACIFIC RAILROADS.

The following tables state the military transportation during the fiscal year on the several railroads named:

Names of companies.	Number of persons transported.	Number of animals transported.	Pounds of freight transported.
Union Pacific (branches and leased lines)	6,748	1,756	55,391,373
Central Pacific (branches and leased lines)	849	605	30,093,076
Sioux City and Pacific	1,351	190	2,279,202
Total	8,948	2,551	87,763,651

The cost of this service is stated as follows:

Names of companies.	Amount of accounts referred to Treasury for settlement.	Estimated amount of accounts not rendered.	Proportion inuring for troops.	Proportion inuring for stores.	Total amount.
Union Pacific	$370,561 09	$123,908 72	$127,508 80	$366,961 01	$494,469 81
Central Pacific	215,577 72	120,386 27	88,185 74	247,778 25	335,963 99
Sioux City and Pacific	2 65	14,708 01	6,565 38	8,145 28	14,710 66
Total	586,141 46	259,003 00	222,259 92	622,884 54	845,144 46

In addition, accounts for telegraphic service rendered by the Union Pacific Railroad Company, amounting to $1,678.60, were filed in this office, making the total amount inuring to the Union Pacific Railroad Company $496,148.41.

Of the amount of $845,144.46 inuring to these roads, the proportionate

amounts accruing over the subsidized and unsubsidized portions of the respective roads are estimated as follows:

Name of company.	Total amount.	Subsidized.	Unsubsidized
Union Pacific	$494,469 81	$454,955 66	$39,514 15
Central Pacific	335,963 99	68,626 79	267,337 20
Sioux City and Pacific	14,710 66	3,538 88	11,171 78
Total	845,144 46	527,121 33	318,023 13

The following is a statement of unsettled accounts of these railroads at the close of the fiscal year:

Names of companies.	In Treasury.	In Q. M. G. O.	Total.
Union Pacific	$1,333,759 15	$1,678 60	$1,335,437 75
Kansas Pacific	79,001 17	.....	79,001 17
Central Pacific	93,718 13	.....	93,718 13
Sioux City and Pacific	7 95	.....	7 95
Total	1,506,486 40	1,678 60	1,508,165 00

The total earnings of these railroads on account of military transportation, from their first opening to 30th June, 1883, is stated as follows:

Names of companies.	Amount paid in cash under act of July 2, 1864.	Amount credited on bonds under act of July 2, 1864.	Amount withheld under act of March 3, 1873. (Rev. Stat. 5260.)	Amount withheld under act of May 7, 1878.	Total amount.
Union Pacific	$1,693,360 69	$1,693,360 87	$3,219,311 09	$1,257,448 93	$7,863,481 58
Central Pacific	261,106 21	261,106 29	691,132 83	1,583,189 62	2,796,534 95
Kansas Pacific	881,196 08	881,196 15	776,143 82	.....	2,538,536 05
Sioux City and Pacific	3,594 28	3,594 29	48,365 54	.....	55,554 11
Total	2,839,257 26	2,839,257 60	4,734,953 28	2,840,638 55	13,254,106 69

The following is a statement of the amount of accounts of the Pacific railroad companies acted upon in this office during the fiscal year ending June 30, 1883:

Names of companies.	Amount in Q. M. G. O. June 30, 1882.	Amount received during fiscal year.	Amount referred for settlement during fiscal year.	Amount in Q. M. G. O. June 30, 1883.
Union Pacific	$1,546,655 69	$527,338 91	$2,072,316 00	$1,678 60
Central Pacific	674,116 70	409,777 61	1,083,894 31	.....
Kansas Pacific	75,723 67	1,991 35	77,715 02	.....
Sioux City and Pacific	5,634 91	2,126 48	7,761 39	.....
Total	2,302,130 97	941,234 35	3,241,686 72	1,678 60

LAND-GRANT RAILROADS.

Payments for military transportation performed during the year over certain land-grant railroads were made through settlements of accounting officers of the Treasury, under the law of June 30, 1882, making

appropriations for the support of the army during the fiscal year ending June 30, 1883, and for other purposes, which enacted as follows:

For the payment for army transportation lawfully due such land-grant railroads as have not received aid in Government bonds, to be adjusted by the proper accounting officers in accordance with the decisions of the Supreme Court in cases decided under such land-grant acts, but in no case shall more than fifty per centum of the full amount of the service be paid, one hundred and twenty-five thousand dollars; *Provided*, That such compensation shall be computed upon the basis of the tariff rates for like transportation performed for the public at large, and shall be accepted as in full for all demands for said services; *And provided further*, That any such land-grant roads as shall file with the Secretary of the Treasury their written acceptance of this provision shall hereafter be paid for like services as herein provided; and all accounts of such railroads for services heretofore rendered shall be audited and paid as herein provided upon application of such roads and their acceptance of such sum in full of all claims for such services; and all laws inconsistent herewith are repealed.

Of the $125,000 appropriated by the foregoing law $76,108.38 remains in the Treasury at the close of the fiscal year unexpended; which, however, is not more than sufficient to settle accounts in course of adjustment or not yet presented.

WAGON AND STAGE TRANSPORTATION.

By wagon carriage the Department moved, by contract or hire and by army teams, 31,624 tons of military supplies, at a cost, as reported, of $773,920.

Forty-four contracts for wagon transportation have been made and received at this office during the fiscal year.

Three thousand five hundred and seventy-seven passengers and 13,079 pounds of stores have been transported by stage, costing $58,880.05.

WATER TRANSPORTATION.

There have been moved by water during the year 31,389 persons, 820 animals, and 10,959 tons of material at a cost of $349,220.14.

The service was performed by vessels belonging to established commercial lines, by contract, and by vessels owned and chartered by the United States.

The following named vessels, owned by the War Department, have been in the service of the Quartermaster's Department during the fiscal year, viz:

Steamer Chester A. Arthur, formerly the Henry Smith, in New York, Harbor; steamer Ordnance, in employ of the Ordnance Department, in New York Harbor; steam tug Atlantic, in New York Harbor; steam tug Resolute, in Boston Harbor; steam launch Thayer, at Fort Adams, R. I.; steam launch Monroe, at Fort Monroe, Va.; steam launch General Jesup, at Governor's Island, Forts Schuyler and Hamilton, New York Harbor; steam launch General Greene, at Fort McHenry, Baltimore, Md.; steam launch Hamilton, at David's Island, New York Harbor; steam launch Barrancas, at Fort Barrancas, Fla.; steamboat General Sherman, on Upper Missouri and Yellowstone Rivers, sold at public auction at Saint Louis, November 8, 1882, for $5,300; propeller General McPherson, in San Francisco Harbor, Cal.; steam launch Dispatch, formerly the Chelan, at Vancouver Depot, Wash.; steam launch Amelia Wheaton, at Fort Cœur d'Alene, Idaho; steam launch Lillie Lee, at Fort Totten, Devil's Lake, Dak.; schooner Matchless, at Key West, Fort Brooke, and Fort Barrancas, Fla., and sloop Belle of the Bay, at Saint Francis Barracks, Fla.

The cost of maintenance and of running these vessels during the year, as reported, was $131,112.68, and the total expenditure for water transportation during the year $349,220.14.

TRANSPORTATION ACCOUNTS AND CLAIMS.

Two thousand four hundred and twenty-five accounts and claims, amounting to $3,576,231.48, were adjusted during the year. Of these, 2,326, amounting to $3,173,977.92, were referred to the proper bureau or office for settlement; 43, amounting to $216,175.74, were unfavorably reported upon and rejection recommended; and 56, amounting to $186,077.82, were suspended for additional evidence; 41, amounting to $6,111.86, were at the close of the year awaiting action.

The amount of appropriation for transportation of the Army was for the fiscal year ending 30th June, 1883, $4,164,000, of which amount about $900,000 was expended for payment of transportation employés, *i. e.*, agents, mechanics repairing wagons and harness, and teamsters. Full details of these expenditures on account of transportation will be found in the accompanying report of Lieut. Col. J. G. Chandler, deputy quartermaster-general, in charge of that branch of service in the office of the Quartermaster-General.

INDEBTED RAILROADS.

Special attention is invited to the remarks of the officer in charge of the collection of the debts of the southern railroad companies to the United States, for purchases of railway material in 1865–'66.

Of the fifty railroads which became indebted to the United States for such purchases, the accounts of forty-six have been closed and settled.

The four railroads which the books of this office show to be still indebted have made no cash payments for several years, and the peculiar circumstances of each case, as set forth in the report of the officer referred to, indicate that the present unsettled and unsatisfactory condition of affairs will continue indefinitely, unless Congress shall interpose either to relieve the debtors or authorize and direct some practicable method of procedure for collection of the balances due

The papers relating to this southern railroad indebtedness are deposited in this office, an unsafe structure, not fire-proof.

The powers of this office do not include the means and appliances for the collection of disputed debts, and it has not the facilities for such an undertaking, which would seem more properly to pertain to the Treasury or law department of the Government.

It is therefore recommended that the necessary action be taken to have this office relieved of this entire business, and transferred to some more suitable department of the Government.

REGULAR AND MISCELLANEOUS SUPPLIES.

ANIMALS.

The cavalry and artillery horses purchased, so far as reported during the year, cost 151,113, at an average price per head of $156.59. Eight were purchased in the Department of the East; 5 in the Department of the South; 6 in the Department of Dakota; 313 in the Department of the Missouri; 150 in the Department of the Platte; 179 in the Department of California; 105 in the Department of Columbia; 38 at the New

York depot; 3 at the Jeffersonville depot; 146 at the Saint Louis depot, and 12 at West Point.

For the Army trains there were purchased 195 mules, costing $33,155, at an average cost of $170.02, and 53 horses costing $11,680 at an average cost of $220.37.

The sale of 937 cavalry and artillery horses, 123 draught horses, and 553 mules realized $87,891.32, which is deposited in the Treasury to the credit of "miscellaneous receipts," except such small sum as was received from sales of horses to officers.

The following is a summary of the number of animals purchased, sold, died, &c., during the year, and remaining on hand June 30, 1883:

On hand, purchased, &c.	Horses.	Mules.	Oxen.
On hand July 1, 1882	8,068	8,464	25
Purchased	1,715	390	.....
Taken up, &c	117	62	.....
Total to be accounted for	9,900	8,916	25
Sold	1,060	553	.....
Died	323	361	.....
Lost and stolen	92	52	.....
Total sold, died, &c	1,475	966	.....
On hand June 30, 1883	8,425	7,950	25

FUEL, FORAGE, AND STRAW.

The issues of fuel were 112,596 cords of wood and 49,818 tons of coal. Of forage 842,298 bushels of oats, 420,706 bushels of corn, 154,367 bushels of barley, 119,635 bushels of bran, 47,028 tons of hay, 2,945 tons of straw, and 83 tons of fodder.

Inconvenience and sometimes hardship results from the operation of the law of June 8, 1878, to officers of the Army serving west of the Mississippi River, which compels the officer to purchase fuel for his own use, and I therefore recommend that this subject be brought to the attention of Congress, and that the allowance, when on hand at posts, be supplied as was done before the passage of the act referred to.

CONTRACTS.

During the year 1,028 contracts were received, examined, and filed in this office. Eight hundred and two were for 126,712 cords of wood, 129,485,178 pounds of coal, 75,970 bushels of charcoal, 26,175,577 pounds of corn, 23,023,820 pounds of oats, 8,710,700 pounds of barley, 3,388,904 pounds of bran, 116,334,666 pounds of hay, 8,254,932 pounds of straw; 14 were for indefinite quantities of fuel and forage; 4 for work on National Cemeteries; 67 for clothing and equipage; 6 for horses and mules; 4 for harness materials; 48 for transportation; 5 for buildings; 1 for ambulance wagons and 4 for wagon materials; 1 for carts and open links; 2 for building materials; 7 for mineral oil; 11 for services; 3 for leather; 2 for broom corn; 3 for stationery; 1 for packing boxes; 1 for construction of cisterns; 3 for construction of roadways, and 39 leases.

WAGONS, AMBULANCES, AND HARNESS.

A sufficient number of 6-mule, 2-horse, and 4-mule army wagons being on hand to meet requirements, none were purchased.

Twenty-five ambulance wagons were purchased under contract at $206 each.

Sixteen spring wagons, Dougherty pattern, were furnished to posts during the year from stock on hand, and 8 spring wagons of other patterns were purchased and supplied under authority of the Secretary of War.

By direction of the War Department 136 sets of 6-mule army-wagon harness complete, at a cost of $10,483.49, and 127 sets of 4-mule ambulance harness complete, costing $6,944.88, were manufactured at the military prison at Fort Leavenworth.

STOVES AND RANGES.

There were delivered to the Quartermaster's Department by the Ordnance Department 646 cast-iron heating stoves of adopted pattern, together with various extra parts (grates, &c., required for repairs), costing $9,076.69.

Sixty army parlor heaters and 36 army cooking ranges, No. 2, and 20 army cooking ranges, No. 1, were purchased, costing $5,985.

LIGHTS.

Eight hundred and six bracket lamps, single burners, 420 pendent lamps, double burners, Army pattern; 1,253 lanterns, oil or oil and candles combined, and the necessary chimneys and wicks, and the various extra parts required for expenditure and repairs have been supplied from stock on hand.

Two hundred and seventy-six thousand gallons of mineral oil were purchased.

The aggregate expenditure on account of illuminating supplies was $53,500. The money received from sales to officers on account of these supplies reverts to the appropriation.

MISCELLANEOUS CLAIMS AND ACCOUNTS.

At the beginning of the year there were on file 12,762 miscellaneous claims and accounts, amounting to $6,996,977.87, and 220 accounts for $75,352.12, and 1,468 claims and accounts, since received, $348,860.27. Total, 14,450, amounting to $7,421,190.26.

Sixty-four claims were approved for $4,301.51; 42 claims were referred to other departments, by report or otherwise, amounting to $118,069.64; 324 claims were referred to the Third Auditor of the Treasury for action of the accounting officer, in amount $51,064.58; reduction on claims approved and referred $10.548.87; 202 claims, amounting to $57,535.77, were rejected; 481 accounts, amounting to $37,713.07, were approved, being a reduction in the amount as presented of $1,188.41; 183 accounts were referred to other departments, to which they pertained, amounting to $55,413.25; 8 accounts were rejected, amounting to $690. Total upon which action has been taken during the fiscal year, 1,304 claims and accounts, amounting to $336,525.10; 12,899 miscellaneous claims and 247 accounts remain on file, amounting to $7,084,665.16.

It will be seen by the foregoing statement that a considerable increase is shown in the number of claims and accounts received during the past year over the previous year, which statement also shows, by comparison, a slight increase in the number of claims and accounts on hand at close of the year, though the total number of such claims and accounts acted upon and disposed of during the year has been greater.

CLAIMS FOR QUARTERMASTER'S STORES PRESENTED UNDER ACT OF JULY 4, 1864.

The act of March 3, 1879, barred all this class of claims not presented and filed prior to January 1, 1880.

There were investigated and reported upon by agents 2,586 claims, amounting to $1,770,118.

The whole matter of investigation of this class of claims has been centralized in the Quartermaster-General's Office.

Congress, by act of August 5, 1882, made appropriation for the payment of salaries and expenses of agents and pay of clerks, and thus relieved the Army appropriation to that extent.

As the years increase since these claims originated, more difficulty is experienced in their investigation; but the work progresses steadily.

There were on hand July 1, 1882, and received during the year, 16,896 claims, amounting to $7,771,174.58.

Military boards and commissions of claims called up 71, for $44,388.91. Upon the above, action was taken as follows: Approved in whole or in part, 1,879. Upon these there was allowed $312,151.70; and disallowed $573,383.13.

One thousand three hundred and fourteen claims were rejected, amounting to $2,606,673.38.

The total on which action was taken was 4,993 claims, amounting to $3,492,208.21.

There remained on hand July 1, 1883, 11,974 claims, amounting to $4,323,355.28.

In addition to the above, there were received 138 claims of a miscellaneous character, amounting to $19,259.64, and 216 of that character, amounting to $39,769.28, received action, and were reported to the accounting officers of the Treasury.

In compliance with the act of August 7, 1882, special action was taken in the claim of Julia A. Nutt, widow and executrix of Haller Nutt, deceased, and it was transmitted to Congress through the honorable Secretary of War, December 22, 1882. The amount as stated was $1,065,264.74.

The following is a statement of claims presented, allowed, disallowed, &c., since July 4, 1864:

Number of claims presented from July 4, 1864, to June 30, 1883		53,744
Number approved from July 4, 1864, to June 30, 1883	14,916	
Number disallowed from July 4, 1864, to June 30, 1883	26,854	
Total acted upon		41,770
Number on hand July 1, 1883		11,974
Amount of 53,744 claims presented		$38,308,661 59
Amount of 41,770 claims acted upon		33,985,306 31
Remaining claims (11,974)		4,323,355 28

CLOTHING AND EQUIPAGE.

There were appropriated for the fiscal year ending June 30, 1883, for clothing and equipage $1,400,000.

The deposits to the credit of the appropriation derived from sales to officers and on account of clothing not drawn by enlisted men amounted to $69,261.96, making an available sum of $1,469,261.96.

Remittances to officers on this account were $1,434,383.98, leaving in

the Treasury an undrawn balance of $34,877.98, which will be needed to pay for articles ordered or already contracted for.

Great care has been taken to avoid accumulation of clothing at posts, and still very little progress has been made towards securing a working stock of such articles as may be needed to meet sudden emergencies, and no less sum than $1,400,000 will keep the Army well clothed and provided with equipage during the next fiscal year.

Requisitions have been filled as promptly as circumstances would permit, and no case of actual suffering for want of clothing has been brought to the attention of this office.

Buffalo overcoats, fur caps, and fur gauntlets to the amount of $95,000 have been purchased, and under existing regulations were used by the troops at the cost of the Government, remaining the property of the Department, but the system does not work well, and hereafter caps and gauntlets will be issued to the soldier at cost price, and the overcoats will be issued only to the troops on guard duty and in such expeditions as may involve loss of life or limb from exposure in rigid northern latitudes.

The scarcity of pelts from which these coats are made is increasing and some other material will have to be substituted.

For many years past this Department has been endeavoring to devise a shoe and boot suitable for Army use, and now has, it is believed, found, after a careful study of the subject, an article which will add much to the comfort of the wearer, will present a good appearance, and at the same time be serviceable.

The Secretary of War has authorized, for trial, the manufacture of 500 pairs at the Military Prison.

Authority has been obtained to sell all the surplus old war stock on hand at depots, not required for issue during the next five years, after advertisement, and instructions to dispose of it have been given.

The helmets supplied are generally satisfactory and a great improvement on the former head covering of the enlisted men.

The 1,000 drab-colored hats purchased last year and sent to Arizona, New Mexico, and Texas have met with great favor, and it is determined to order an additional thousand.

Dark-blue indigo cloth of finer quality has been adopted, and purchases are being made, and hereafter the uniform coat will be manufactured from it.

A drum of new pattern has been adopted and will hereafter be issued, the old war stock having become depleted.

Specifications for clothing and equipage have been either amended or adopted for scrubbing-brushes, trousers, barrack chairs, helmets, drum slings, drums, cotton stockings, blouse-lining flannel, dark blue shirting and cape-lining flannel, dark-blue indigo coat cloth, dark blue overshirts, blouses, and drawers; and standards were distributed to the general depots of scrubbing brushes, trousers, barrack chairs, helmets, drums, muskrat caps and gauntlets, cotton stockings, gray blouse-lining flannel, dark blue overshirts, dark blue coat cloth and drawers.

Of the property issued last year to the relief of sufferers by the overflow of the Mississippi, as shown in that report, to the value of $9,630.41, articles to the value of $4,359.89 have not been returned. Efforts to secure their return have failed. This is the case generally when property of the Government is diverted from its appropriate use.

Under the act of March 3, 1881, 3 campaign hats, 1,003 forage caps, 5,525 great-coats, 90 uniform coats, 683 uniform jackets, 4,624 blouses and sack coats, 1,752 trousers, 63 pairs boots, 725 pairs shoes, and 167

drawers—old pattern—were turned over to the National Home for Disabled Volunteers.

Boots, shoes, chairs, and corn-brooms required for the Army have all been manufactured at the Military Prison, as required, to the amount of $170,133.72.

Clothing and equipage to the value of $2,600.96 were furnished the detachment commanded by Lieutenant Garlington, of the Lady Franklin Bay Expedition.

The illustrations of the uniform of the Army have been published and distributed to the commanding generals of divisions and departments, and commanding officers of regiments and companies, as well as to officers of the Quartermaster's Department.

The hospital tents are worn out and exhausted.

Full and complete information, with statements, will be found in the report of Capt. J. F. Rodgers, U. S. A., in charge of the clothing supply branch of this office herewith.

NATIONAL CEMETERIES.

Since the last annual report of this office the soldiers' lot in the Woodland Cemetery at Quincy, Ill., has been added to the list of National Military Cemeteries, making the whole number of these cemeteries under the care and control of the Quartermaster's Department eighty-three, in which there are now 321,369 interments.

During the year seven superintendents were appointed, one died, one resigned, one was discharged, and one appointment was cancelled, leaving seventy in service at the close of the year.

Though the contracts for furnishing head-stones for soldiers' graves in private, village, and city cemeteries were closed last year, the stones ordered under them have not yet all been delivered and erected. Much delay has been experienced in the prosecution of this work and many difficulties encountered in bringing the business to a satisfactory close. The Department has, therefore, made arrangements for the furnishing at the quarries, to be shipped to the applicants direct, such additional stones as may be required for graves in these cemeteries. Applications continue to be received, and are to be filled by supplying the stones in the manner indicated.

A considerable number of the old head-boards which have marked the graves of prisoners of war and civilians in the Arlington and Soldiers' Home National Cemeteries have been replaced with small marble slabs. More will be furnished, as funds can be spared for the purpose, until all the graves in the National Cemeteries have been supplied with permanent head-stones.

Satisfactory progress has been made in the work of constructing the roadways to the Chattanooga, Mound City, and New Albany National Cemeteries, under the special appropriations therefor, and the work will be finished before winter.

Outbuildings at the Vicksburg Cemetery, and rostrums at Fort Leavenworth, Fort Scott, Marietta, Mound City, and Stone River Cemeteries have been constructed, and the arched gateway at the Marietta Cemetery has been completed.

New water supply has been introduced at the Nashville Cemetery.

The purchase of additional land for the Loudon Park National Cemetery, near Baltimore, Md., has been completed, and proposals have been invited for the work of improvements rendered necessary by the extension of the grounds.

The necessity for the extension of the grounds of the Cypress Hills National Cemetery has been heretofore fully set forth in the annual reports of this office, and a bill having this object in view has been reported upon favorably by the Military Committee of the House of Representatives at the first session of the Forty-seventh Congress.

This report, however, as also the former action of the Department in the matter, recommended the purchase of two and two-thirds acres of land from the Cypress Hills Cemetery Company, at a cost of some $35,000. But it is ascertained that suitable ground for the purpose required, conveniently near this cemetery, can be procured at about $1,200 per acre for a tract of about 13 acres, taken as a whole. By this course five times as much area will be secured at less than half the cost of the purchase previously contemplated.

Considerations of economy, no less than the pressing needs for the extension of these grounds, impel me to urge that the special attention of Congress be invited to this subject.

The ground belonging to the Soldiers' Home, lying north of the Harewood road, including the present site of the Soldiers' Home National Cemetery, has recently been transferred to the War Department for the use of the Soldiers' Home National Cemetery, and an appropriation of $15,000 by Congress is asked in payment therefor.

The site of the National Cemetery, though under control of the Quartermaster's Department since 1862, and now almost wholly occupied by military interments, in reality belongs to the Soldiers' Home, as no compensation has been made for it to that institution.

The extension of this cemetery, by the addition of these grounds, affords a much needed improvement, and enables the Department to provide for future interments and furnish necessary accommodations for occasions of public ceremonies.

For the perpetual occupancy and use of this ground by the United States, it seems but just and reasonable that the Home should be compensated.

It has been suggested by the officer in charge of National Cemeteries, in his report to this office, herewith submitted, that the projected new park on the river flats be connected with the Arlington Grounds by means of a bridge. This suggestion meets my hearty approval, and I desire to invite the special attention of the Scretary of War to the subject.

The recent purchase of the Arlington estate, under special authority of Congress, and the perfection of the title thereto, have placed the ownership of these grounds beyond controversy.

The tract covers an area of some 1,100 acres. Of this the National Cemetery occupies about one-fifth and the post of Fort Myer about one-sixth. The grounds of the cemetery, tastefully laid out and appropriately ornamented, have been provided with substantial and permanent improvements—roads, drives, and entrances—and with the care and attention devoted to its maintenance always presents a handsome and attractive appearance. This cemetery in reality is not only a place of sepulture, but an extensive park of rare beauty, complete within itself, and it seems but fitting that it should form a part of the comprehensive system of improvements and beautifying of the water front of the city contemplated and inaugurated by special direction of Congress.

The present means of approach to this cemetery from this city is by the Aqueduct Bridge, thence by a rough road uninviting to visitors and at times almost impassable. The improvement of this road has been repeatedly recommended, and the estimates for the current year included an item for these repairs, but no appropriation was made.

In view of the recommendation that a new means of approach be provided by the construction of a bridge to connect the new river park with the grounds of this cemetery, the request for an appropriation for the repair of this road is not renewed.

S. B. HOLABIRD,
Quartermaster-General, United States Army.

Hon. ROBERT T. LINCOLN,
Secretary of War.

List of papers accompanying the annual report of the Quartermaster-General for the fiscal year ending June 30, 1883.

1. Report of the inspection branch of the Quartermaster-General's office during the year ending June 30, 1883.

2. Report of Col. Alex. J. Perry, assistant quartermaster-general, United States Army, of the operations of the accounts branch of the Quartermaster-General's Office during the year ending June 30, 1883.

3. Report of Capt. J. F. Rodgers, military storekeeper, United States Army, of the operations of the clothing supply branch of the Quartermaster-General's Office during the year ending June 30, 1883.

A.—Statement showing articles of clothing and equipage on hand at the issuing depots June 30, 1882, the quantities purchased, manufactured, received from posts and depots, taken up, sold, transferred, expended, issued to the Army, and the quantities remaining in depot June 30, 1883.

B.—Statement of amounts received and expended by the Quartermaster's Department on account of clothing and equipage during the year.

C.—Statement showing remittances on account of clothing and equipage during the year.

D.—Specifications for clothing, equipage, and materials for the manufacture of clothing and equipage, adopted or amended and distributed to the officers of the Quartermaster's Department during the fiscal year ending June 30, 1883.

E.—Statement showing articles of old-pattern clothing turned over to the National Home for Disabled Volunteers during the year.

F.—Statement showing articles of clothing and equipage issued to the Lady Franklin Bay Expedition during the year ending June 30, 1883, and money value of the property.

G.—Statement showing articles of clothing and equipage issued to the military prison at Fort Leavenworth, Kans., during the year, and money value thereof.

H.—Statement showing articles of quartermaster's stores issued to the military prison at Fort Leavenworth, Kans., during the year, and money value of the property.

I.—Statement showing value of labor performed for the Quartermaster's Department by the military prison at Fort Leavenworth, Kans., during the year.

K.—Statement showing articles of clothing and equipage manufactured at the military prison at Fort Leavenworth, Kans., for the Quartermaster's Department, during the year ending June 30, 1883; also, cost of materials, labor, &c.

L.—Copy of report of Capt. J. F. Rodgers, military storekeeper, United States Army, of April 9, 1883, relating to improvements in boots and shoes for the Army, with copy of action of the Secretary of War thereon, and copies of drawings of paterns of shoes recommended for trial.

M.—Copy of book on the military shoes translated and printed by direction of the Quartermaster-General from the original of Maj. S. A. Salquin, Army Swiss Confederation.

4. Report of Lieut. Col. J. G. Chandler, deputy quartermaster-general, Unite States Army, of the operations of the Quartermaster-General's Office pertaining to transportation and indebted railroads, regular and miscellaneous supplies, and miscellaneous claims and accounts during the fiscal year ending June 30, 1883.

A.—Statement of all troops and property transported under direction of the Quartermaster's Department during the year.

B.—Statement showing principal movements of troops during the year, and average length of march or movement in each case.

C.—Abstract of contracts for wagon transportation entered into by the Quartermaster's Department during the year.

D.—Abstract of contracts for water transportation for the year ending June 30, 1883.

E.—Statement of vessels owned and purchased by the Quartermaster's Department during the fiscal year ending June 30, 1883.

F.—Statement of vessels chartered, impressed, or employed by the Quartermaster's Department during the year ending June 30, 1883.

G.—Circular embodying rules and regulations regarding certain transportation and the settlement of accounts arising therefrom.

H.—Statement showing cost of transportation of the Army and the number of persons and pounds of freight transported during the fiscal year.

I.—Copy of letter of the Solicitor of the Treasury in relation to suit brought against certain indebted railroad companies.

5. Report of Col. Alex. J. Perry, assistant quartermaster-general, United States Army, of the operations of the barracks and quarters branch, Quartermaster-General's Office, during the fiscal year ending June 30, 1883.

6. Report of Maj. Benj. C. Card, quartermaster, United States Army, of the operations of the claims branch of the Quartermaster-General's Office for the fiscal year ending June 30, 1883.

7. Report of Lieut. Col. R. N. Batchelder, deputy quartermaster-general, United States Army, of the affairs relating to the care and maintenance of national military cemeteries for the fiscal year ending June 30, 1883.

A.—Statement of disbursements of appropriations for national cemeteries during the fiscal year ending June 30, 1883.

B.—Copy of deed, dated March 31, 1883, executed by George W. C. Lee, conveying to the United States the title of property known as the Arlington estate.

C.—Copy of the opinion of Attorney-General in relation to the validity and completeness of title deed to Arlington estate.

1.—*Annual report of the operations of the Inspection Branch during the fiscal year ending June* 30, 1883.

The duties of this branch have been principally as follows:

First. Keeping record of all correspondence relating individually to officers of the Quartermaster's Department, or to officers doing duty therein, and to clerks, agents, and other employés of the Quartermaster's Department, from their original entry into the service to their final discharge therefrom.

Second. All correspondence relative to the assignment to duty of officers of the Quartermaster's Department; to the rendition and subject matter of annual reports, and the employment and compensation of civilian clerks and other employés whose salaries are not fixed by law, as provided for in paragraph 1422, Army Regulations

Third. Briefing, entering, and filing the monthly personal reports of stations and duties of officers of the Quartermaster's Department and of officers who have performed duties therein; keeping "record of officers of the Quartermaster's Department," and "record of acting assistant quartermasters."

Fourth. Briefing, entering, and filing of the monthly returns of stations of officers; keeping of "station book" and the preparation of "roster of officers of the Quartermaster's Department, with rank, grade, stations, addresses, and services of the officers of the Department, and of officers and agents doing duty therein," published monthly from this office; also preparing monthly returns of officers of the Quartermaster's Department for the Adjutant-General's office, under paragraph 722, Army Regulations.

Fifth. Keeping record of time lost by clerks, messengers, &c., employed in office of the Quartermaster-General.

Sixth. The filing and distribution of orders, circulars, books, pamphlets, and all other printed matter.

In addition to the regular duties enumerated above, this branch also acted upon all requests for newspapers and other periodicals for post

libraries and reading rooms; ordering the subscriptions and keeping account of the same under the provisions of paragraph 538, Army Regulations.

Miscellaneous literature, to the value of about $8,751.34 (such as Harper's and Frank Leslie's publications, scientific and military journals, reviews, and many of the political papers), has been supplied to the military post libraries. The subscriptions have been made and paid for by the depot quartermasters at New York City and Washington, D. C.

The following is a statement of the number of orders, circulars, books, and pamphlets received and distributed during the fiscal year:

Designation.	Number received.	Number distributed.
General Orders, Quartermaster-General's Office	.....	50
General Orders, Adjutant-General's Office	100,710	69,225
General Court-Martial Orders, Adjutant-General's Office	31,200	25,350
Circulars, Adjutant-General's Office	4,200	3,360
Circular letters, Quartermaster-General's Office	1,200	800
Rolls of honor	.....	40
Miscellaneous books and pamphlets	7,749	6,948
Total	145,059	105,773

The following is a statement of promotions, appointments, retirements, &c., of officers of the Quartermaster's Department:

STRENGTH OF ORGANIZATION JULY 1, 1882.

Quartermaster-General	1
Assistant quartermasters general	4
Deputy quartermasters-general	8
Quartermasters	14
Assistant quartermasters	30
Military storekeepers	6
Total	63

I.—*Promotions* (3).

Ludington, Marshall I., major and quartermaster, to be deputy quartermaster-general, with the rank of lieutenant-colonel, March 15, 1883, *vice* Myers, retired from active service.

Scully, James W., captain and assistant quartermaster, to be quartermaster, with the rank of major, January 25, 1883, *vice* Baker, deceased.

Foster, Charles W., captain and assistant quartermaster, to be quartermaster, with the rank of major, March 15, 1883, *vice* Ludington, promoted.

II.—*Appointments* (2).

Booth, Charles A., first lieutenant First Infantry, to be assistant quartermaster, with the rank of captain, to date February 9, 1883, *vice* Scully, promoted.

Floyd, Daniel H., first lieutenant Eighteenth Infantry, to be assistant quartermaster, with the rank of captain, to date from May 2, 1883, *vice* Foster, promoted.

III.—*Retirements* (1).

Myers, William, lieutenant-colonel and deputy quartermaster-general, March 15, 1883, under the provisions of paragraph 1243 Revised Statutes.

IV.—*Casualties.*

Died (1).—Barker, Edwin D., major and quartermaster, died January 25, 1883, at Vancouver, Wash.

RECAPITULATION.

Grade and rank.	In service July 1, 1882.	Died.	Retired.	Gained by promotion.	Loss by promotion.	Gained by appointment.	In service June 30, 1883.
Quartermaster General with rank of brigadier general	1	.....	.....	.....	.....	.....	1
Assistant quartermasters-general with rank of colonel	4	.....	.....	.....	.....	.....	4
Deputy quartermasters-general with rank of lieutenant-colonel	8	.....	1	1	.....	.....	8
Quartermasters with rank of major	14	1	.....	2	1	.....	14
Assistant quartermasters with rank of captain	30	.....	.....	.....	2	2	30
Military storekeepers with rank of captain	6	.....	.....	.....	.....	.....	6
Total	63	1	1	3	3	2	63

Addresses and stations of officers of the Quartermaster's Department, June 30, 1883.

QUARTERMASTER-GENERAL.

Ingalls. Brigadier-General Rufus.

COLONELS AND ASSISTANT QUARTERMASTERS-GENERAL.

Holabird, Samuel B., in charge of general depot of the Quartermaster's Department, Philadelphia, Pa., since May 1, 1882.
Tompkins, Charles H., chief quartermaster Military Division of the Missouri, Chicago, Ill., since February 17, 1881.
Ekin, James A., in charge of general depot of the Quartermaster's Department, Jeffersonville, Ind., and disbursing officer of Quartermaster's Department at Louisville, Ky., since September 26, 1872.
Saxton, Rufus, chief quartermaster Military Division of the Pacific, Presidio of San Francisco, Cal., since October 31, 1879.

LIEUTENANT-COLONELS AND DEPUTY QUARTERMASTERS-GENERAL.

Bingham, Judson D., chief quartermaster Department of the Missouri, Fort Leavenworth, Kans., since October 20, 1879.
Perry, Alex. J., on duty in Quartermaster-General's Office, Washington, D. C., since May 10, 1882.
Hodges, Henry C., in charge of general depot of the Quartermaster's Department, New York City, since April 10, 1882.
Chandler, John G., Quartermaster-General's Office, Washington, D. C., since May 23, 1881.
Sawtelle, Charles G., chief quartermaster Military Division Atlantic and Department of the East, Governor's Island, New York, since May 1, 1882.
Dana, James J., chief quartermaster Department of the South, Newport Barracks, Ky., since April 26, 1882.
Batchelder, Richard N., in charge of general depot of the Quartermaster's Department, and Office of National Cemeteries, Washington, D. C., since June 1, 1882.
Ludington, Marshall I., on temporary duty in Quartermaster-General's Office since May 16, 1883.

MAJORS AND QUARTERMASTERS.

Moore, James M., chief quartermaster Department of Dakota, Fort Snelling, Minn., since June 1, 1883.
Card, Benjamin C., on duty in Quartermaster-General's Office, Washington, D. C., since June 2, 1882.
Reynolds, Charles A., Atlanta, Ga., in charge of national cemeteries in vicinity of Atlanta, since October 18, 1882.
Dandy, George B., chief quartermaster Department of the Platte, Omaha, Nebr., since March 31, 1883.
Weeks, George H., chief quartermaster Department of California, since May —, 1883, and in charge of general depot of the Quartermaster's Department, San Francisco, Cal., since May 5, 1882.

Hughes, William B., Philadelphia, Pa., since May 22, 1882.
Robinson, Augustus G., disbursing quartermaster District of Montana, Helena, Mont., since August 2, 1879.
Lee, James G. C., chief quartermaster Department of Texas, San Antonio, Tex., since May 11, 1882.
Gilliss, James, Fort Monroe, Va., since September 25, 1880.
Eckerson, Theodore J., Boston, Mass., since April 25, 1881.
McGounigle, Andrew J., chief quartermaster Department of Arizona, Whipple Barracks, Ariz., since May 13, 1882.
Grimes, Edward B., Fort Leavenworth, Kans., since April 10, 1882.
Scully, James W., Fort Adams, R. I., since August 28, 1882.
Foster, Charles W., Baltimore, Md., since February 3, 1881.

CAPTAINS AND ASSISTANT QUARTERMASTERS.

Belcher, John H., David's Island, New York Harbor, since June 1, 1881.
Kirk, Ezra B., Bismarck, Dak. T., since October 16, 1879.
Kimball, Amos S., Portland, Oreg., since June 1, 1881; also acting chief quartermaster Department of the Columbia, at Vancouver Barracks, Wash. T.
Rockwell, Almon F., on detached service, Washington, D. C., in charge of Public Buildings and Grounds in District of Columbia, since April 1, 1881. Address, No. 1700 Pennsylvania avenue, northwest.
Smith, Gilbert C., Vancouver Depot, Wash., since April 17, 1883.
Hunt, Thomas B., Fort Buford, Dak., since March 1, 1883.
Strang, Edward J., New Orleans, La., since April 17, 1882.
Furey, John V., Omaha, Nebr., since May 17, 1877.
Forsyth, Lewis C., Buffalo, N. Y., since April 26, 1882.
Hoyt, Charles H., West Point, New York, since July 1, 1880.
Blunt, Asa P., governor Military Prison, Fort Leavenworth, Kans., since June 4, 1875.
Lord, James H., Cheyenne, Wyo., since June 30, 1880.
Atwood, Edwin B., Saint Louis, Mo., since March 28, 1883.
Marshall, James M., chief quartermaster District of New Mexico, Santa Fé, N. Mex., since December 3, 1881.
Simpson, John, Denver, Colo., since May 23, 1882.
Campbell, Lafayette E., San Antonio, Tex., since March 29, 1881.
Miltimore, Alonzo E., Jefferson Barracks, Mo., since November 18, 1882.
Humphrey, Charles F., Presidio, San Francisco, Cal., since September 30, 1879.
Williams, Charles W., Fort Davis, Tex., since March 27, 1883.
Wheeler, Daniel D., Saint Paul, Minn., since December 1, 1881.
Barnett, Charles R., Fort McKinney, Wyo., since May 27, 1883.
McCauley, Charles A. H., Chicago, Ill., under orders for duty at Fort Thornburgh, Utah.
Hubbard, Edward B., Fort Huachuca, Ariz., under orders to report to Headquarters Military Division of the Pacific.
Crook, G. H., Fort Union, N. Mex., since April 10, 1882.
Hathaway, Forest H., Fort Maginnis, Mont., since June 30, 1882.
Jacobs, Joshua W., Fort Stanton, N. Mex., since August 21, 1882. Under orders for duty at Hot Springs, Ark.
Bird, Charles, Fort Snelling, Minn., since April 19, 1882.
Clem, John L., Schuylkill Arsenal, Philadelphia, Pa., since July 18, 1882.
Booth, Charles A., Columbus Barracks, Ohio, since April 1, 1883.
Floyd, Daniel H. Address, Fort Maginnis, Mont. Under orders for duty at Fort Stanton, N. Mex.

CAPTAINS AND MILITARY STOREKEEPERS.

Gill, William H., Schuylkill Arsenal, Philadelphia, Pa., since July 1, 1882.
Alligood, Charles A., acting assistant quartermaster, Fort McHenry, Md., since November 8, 1882.
Rodgers, John F., Washington, D. C. On inspection duty connected with clothing and equippage, United States Army, since July 1, 1882.
Hull, Gustavus A., San Francisco, Cal., since December 12, 1878.
Barrett, Addison, Jeffersonville, Ind., since April 8, 1873.
Martin, William P., Saint Louis clothing depot, Saint Louis, Mo., since December 22, 1878.

The following is a report of duties performed by officers of the Quartermaster's Department during the fiscal year ending June 30, 1883:

A.—*Annual report of officers of the Quartermaster's Department for the fiscal year ending June* 30, 1883.

No.	Name and grade.	Rank.	Duties, &c.
	QUARTERMASTER-GENERAL.		
1	Rufus Ingalls	Brigadier-general and brevet major-general	In charge of the Quartermaster's Department, U. S. Army, at Washington, D. C.
	ASSISTANT QUARTERMASTERS-GENERAL.		
1	Samuel B. Holabird	Colonel and brevet brigadier-general	In charge of the general depot of the Quartermaster's Department at Philadelphia, Pa.
2	Charles H. Tompkins	Colonel and brevet brigadier-general	Chief quartermaster Military Division of the Missouri and depot quartermaster at Chicago, Ill.
3	James A. Ekin	Colonel and brevet brigadier-general	In charge of the general depot of the Quartermaster's Department at Jeffersonville, Ind.; also disbursing officer of the Quartermaster's Department, and in charge of national cemeteries in Kentucky and Tennessee, at Louisville, Ky.
4	Rufus Saxton	Colonel and brevet brigadier-general	Chief quartermaster Military Division of the Pacific and Department of California, at Presidio of San Francisco, Cal.
	DEPUTY QUARTERMASTERS-GENERAL.		
1	Judson D. Bingham	Lieutenant-colonel and brevet brigadier-general	Chief quartermaster Department of the Missouri, at Fort Leavenworth, Kans.
2	Alexander J. Perry	Lieutenant-colonel and brevet brigadier-general	On duty in the Quartermaster-General's Office at Washington, D. C.
3	Henry C. Hodges	Lieutenant-colonel	In charge of the general depot of the Quartermaster's Department at New York City.
4	John G. Chandler	Lieutenant-colonel and brevet-colonel	On duty in the Quartermaster-General's Office at Washington, D. C.
5	William Myers	Lieutenant-colonel and brevet brigadier-general	To October 20, 1882, on duty as Chief Quartermaster Department of Dakota, at Fort Snelling, Minn. From October 20, 1882, on leave of absence on surgeon's certificate until retired from active service, March 15, 1883.
6	Charles G. Sawtelle	Lieutenant-colonel and brevet brigadier-general	Chief quartermaster Military Division of the Atlantic and Department of the East, at Governor's Island, New York Harbor.
7	James J. Dana	Lieutenant-colonel and brevet brigadier-general	Chief quartermaster Department of the South, at Newport Barracks, Ky.
8	Richard N. Batchelder	Lieutenant-colonel and brevet-colonel	In charge of the general depot of the Quartermaster s Department and office of national cemeteries, at Washington, D. C.
9	Marshall I. Ludington	Lieutenant-colonel and brevet lieutenant-colonel	Chief quartermaster Department of the Platte, at Omaha, Nebr., to March 31, 1883. On leave of absence from November 19, 1882, until May 15, 1883. From May 16, 1883, on temporary duty in the Quartermaster-General's Office at Washington, D. C. May 15, 1883, promoted to grade of Deputy Quartermaster-General with the rank of lieutenant-colonel.
	QUARTERMASTERS.		
1	James M. Moore	Major and brevet lieutenant-colonel	On duty in office of Quartermaster-General to May 26, 1883. From May 27, 1883, to May 31, 1883, *en route* to headquarters Department of Dakota, and from June 1, 1883, chief quartermaster Department of Dakota, at Fort Snelling, Minn.

2	Benjamin C. Card	Major and brevet brigadier-general	On duty in office of the Quartermaster-General, at Washington, D. C.
3	Charles A. Reynolds	Major and brevet lieutenant-colonel	To October 6, 1882, awaiting orders. From October 6 to 18, 1882, *en route* to Atlanta, Ga. From October 18, 1882, in charge of national cemeteries in Georgia and adjoining States, at Atlanta, Ga.
4	George B. Dandy	Major and brevet brigadier-general	To March 28, 1883, depot quartermaster at Saint Louis, Mo. From March 31, 1883, chief quartermaster Department of the Platte, at Omaha, Nebr.
5	George H. Weeks	Major and brevet lieutenant-colonel	In charge of the general depot of the Quartermaster's Department at San Francisco, Cal.
6	William B. Hughes	Major	On duty at the general depot of the Quartermaster's Department at Philadelphia, Pa., in charge of transportation, &c.
7	Augustus G. Robinson	Major	Disbursing quartermaster District of Montana, Helena, Mont.
8	Edward D. Baker	Major	Chief quartermaster Department of the Columbia, at Vancouver Barracks, and in charge of depot at Vancouver, Wash., to January 25, 1883. Died.
9	James G. C. Lee	Major and brevet lieutenant-colonel	Chief quartermaster Department of Texas; also, from January 2, 1883, in charge of depot at San Antonio, Tex.
10	James Gillis	Major	Post quartermaster and quartermaster of artillery school at Fort Monroe, Va.
11	Theodore J. Eckerson	Major	Depot quartermaster at Boston, Mass.
12	Andrew J. McGonnigle	Major and brevet lieutenant-colonel	Chief quartermaster Department of Arizona, Whipple Barracks, Ariz.
13	Edward B. Grimes	Major	Assistant to chief quartermaster Department of the Missouri, at Fort Leavenworth, Kans.
14	James W. Scully	Major and brevet colonel	To August 5, 1882, post quartermaster at Fort Thomas, Ariz. From August 10 to 19, 1882, *en route* to headquarters Military Division of the Atlantic. From August 28, 1882, on duty at Fort Adams, R. I., as post quartermaster.
15	Charles W. Foster	Major and brevet colonel	Depot quartermaster at Baltimore, Md. Promoted to the grade of quartermaster with the rank of major, March 15, 1883.

ASSISTANT QUARTERMASTERS.

1	John H. Belcher	Captain and brevet major	Depot quartermaster at David's Island, New York Harbor.
2	Ezra B. Kirk	Captain	Depot quartermaster at Bismarck, Dak., on leave of absence from December 15, 1882, to May 31, 1883.
3	Amos S. Kimball	Captain	Disbursing quartermaster Department of the Columbia, and depot quartermaster at Portland, Oreg.; also, from January 27, 1883, acting chief quartermaster Department of the Columbia at Vancouver Barracks, Wash.
4	Almon F. Rockwell	Captain and brevet lieutenant colonel, U. S. A	On detached service in charge of public buildings and grounds in District of Columbia, with rank, pay, and emoluments of a colonel.
5	Gilbert C. Smith	Captain	To July 16, 1822, depot quartermaster and post quartermaster at Fort Lowell, Ariz. From August 7, 1882, to February 18, 1883, post quartermaster at San Diego Barracks, Cal. To April 11, 1883, awaiting assignment at San Francisco, Cal.; and from April 17, 1883, depot quartermaster at Vancouver, Wash. Ter.
6	Thos. B. Hunt	Captain and brevet lieutenant-colonel	To February 14, 1883, awaiting orders at Washington, D. C. February 15, 1883, to February 26, 1883, *en route* to Fort Buford, Dak.; and from March 1, 1883, post quartermaster at Fort Buford, Dak.
7	Edward J. Strang	Captain and brevet lieutenant-colonel	Depot quartermaster at New Orleans, La.
8	John V. Furey	Captain and brevet major	Depot quartermaster at Omaha, Nebr., and in charge of office of chief quartermaster Department of the Platte. From November 8, 1882, to March 31, 1883.
9	Lewis C. Forsyth	Captain and brevet major	Disbursing officer at Buffalo, N. Y.

The following is a report of duties performed by officers of the Quartermaster's Department during the fiscal year ending June 30, 1883:

A.—*Annual report of officers of the Quartermaster's Department for the fiscal year ending June* 30, 1883.

No.	Name and grade.	Rank.	Duties, &c.
	QUARTERMASTER-GENERAL.		
1	Rufus Ingalls	Brigadier-general and brevet major-general	In charge of the Quartermaster's Department, U. S. Army, at Washington, D. C.
	ASSISTANT QUARTERMASTERS-GENERAL.		
1	Samuel B. Holabird	Colonel and brevet brigadier-general	In charge of the general depot of the Quartermaster's Department at Philadelphia, Pa.
2	Charles H. Tompkins	Colonel and brevet brigadier-general	Chief quartermaster Military Division of the Missouri and depot quartermaster at Chicago, Ill.
3	James A. Ekin	Colonel and brevet brigadier-general	In charge of the general depot of the Quartermaster's Department at Jeffersonville, Ind.; also disbursing officer of the Quartermaster's Department, and in charge of national cemeteries in Kentucky and Tennessee, at Louisville, Ky.
4	Rufus Saxton	Colonel and brevet brigadier-general	Chief quartermaster Military Division of the Pacific and Department of California, at Presidio of San Francisco, Cal.
	DEPUTY QUARTERMASTERS-GENERAL.		
1	Judson D. Bingham	Lieutenant-colonel and brevet brigadier-general	Chief quartermaster Department of the Missouri, at Fort Leavenworth, Kans.
2	Alexander J. Perry	Lieutenant-colonel and brevet brigadier-general	On duty in the Quartermaster-General's Office at Washington, D. C.
3	Henry C. Hodges	Lieutenant-colonel	In charge of the general depot of the Quartermaster's Department at New York City.
4	John G. Chandler	Lieutenant-colonel and brevet-colonel	On duty in the Quartermaster-General's Office at Washington, D. C.
5	William Myers	Lieutenant-colonel and brevet brigadier-general	To October 20, 1882, on duty as Chief Quartermaster Department of Dakota, at Fort Snelling, Minn. From October 20, 1882, on leave of absence on surgeon's certificate until retired from active service, March 15, 1883.
6	Charles G. Sawtelle	Lieutenant-colonel and brevet brigadier-general	Chief quartermaster Military Division of the Atlantic and Department of the East, at Governor's Island, New York Harbor.
7	James J. Dana	Lieutenant-colonel and brevet brigadier-general	Chief quartermaster Department of the South, at Newport Barracks, Ky.
8	Richard N. Batchelder	Lieutenant-colonel and brevet-colonel	In charge of the general depot of the Quartermaster's Department and office of national cemeteries, at Washington, D. C.
9	Marshall I. Ludington	Lieutenant-colonel and brevet lieutenant-colonel	Chief quartermaster Department of the Platte, at Omaha, Nebr., to March 31, 1883. On leave of absence from November 19, 1882, until May 15, 1883. From May 16, 1883, on temporary duty in the Quartermaster-General's Office at Washington, D. C. May 15, 1883, promoted to grade of Deputy Quartermaster-General with the rank of lieutenant-colonel.
	QUARTERMASTERS.		
1	James M. Moore	Major and brevet lieutenant-colonel	On duty in office of Quartermaster-General to May 26, 1883. From May 27, 1883, to May 31, 1883, *en route* to headquarters Department of Dakota, and from June 1, 1883, chief quartermaster Department of Dakota, at Fort Snelling, Minn.

			to Atlanta, Ga. From October 18, 1882, in charge of national cemeteries in Georgia and adjoining States, at Atlanta, Ga.
4	George B. Dandy	Major and brevet brigadier-general	To March 28, 1883, depot quartermaster at Saint Louis, Mo. From March 31, 1883, chief quartermaster Department of the Platte, at Omaha, Nebr.
5	George H. Weeks	Major and brevet lieutenant-colonel	In charge of the general depot of the Quartermaster's Department at San Francisco, Cal.
6	William B. Hughes	Major	On duty at the general depot of the Quartermaster's Department at Philadelphia, Pa., in charge of transportation, &c.
7	Augustus G. Robinson	Major	Disbursing quartermaster District of Montana, Helena, Mont.
8	Edward D. Baker	Major	Chief quartermaster Department of the Columbia, at Vancouver Barracks, and in charge of depot at Vancouver, Wash., to January 25, 1883. Died.
9	James G. C. Lee	Major and brevet lieutenant-colonel	Chief quartermaster Department of Texas; also, from January 2, 1883, in charge of depot at San Antonio, Tex.
10	James Gilliss	Major	Post quartermaster and quartermaster of artillery school at Fort Monroe, Va.
11	Theodore J. Eckerson	Major	Depot quartermaster at Boston, Mass.
12	Andrew J. McGonnigle	Major and brevet lieutenant-colonel	Chief quartermaster Department of Arizona, Whipple Barracks, Ariz.
13	Edward B. Grimes	Major	Assistant to chief quartermaster Department of the Missouri, at Fort Leavenworth, Kans.
14	James W. Scully	Major and brevet colonel	To August 5, 1882, post quartermaster at Fort Thomas, Ariz. From August 10 to 19, 1882, *en route* to headquarters Military Division of the Atlantic. From August 28, 1882, on duty at Fort Adams, R. I., as post quartermaster.
15	Charles W. Foster	Major and brevet colonel	Depot quartermaster at Baltimore, Md. Promoted to the grade of quartermaster with the rank of major, March 15, 1883.
	ASSISTANT QUARTERMASTERS.		
1	John H. Belcher	Captain and brevet major	Depot quartermaster at David's Island, New York Harbor.
2	Ezra B. Kirk	Captain	Depot quartermaster at Bismarck, Dak., on leave of absence from December 15, 1882, to May 31, 1883.
3	Amos S. Kimball	Captain	Disbursing quartermaster Department of the Columbia, and depot quartermaster at Portland, Oreg.; also, from January 27, 1883, acting chief quartermaster Department of the Columbia at Vancouver Barracks, Wash.
4	Almon F. Rockwell	Captain and brevet lieutenant colonel, U. S. A	On detached service in charge of public buildings and grounds in District of Columbia, with rank, pay, and emoluments of a colonel.
5	Gilbert C. Smith	Captain	To July 16, 1822, depot quartermaster and post quartermaster at Fort Lowell, Ariz. From August 7, 1882, to February 18, 1883, post quartermaster at San Diego Barracks, Cal. To April 11, 1883, awaiting assignment at San Francisco, Cal.; and from April 17, 1883, depot quartermaster at Vancouver, Wash. Ter.
6	Thos. B. Hunt	Captain and brevet lieutenant-colonel	To February 14, 1883, awaiting orders at Washington, D. C. February 15, 1883, to February 26, 1883, *en route* to Fort Buford, Dak.; and from March 1, 1883, post quartermaster at Fort Buford, Dak.
7	Edward J. Strang	Captain and brevet lieutenant-colonel	Depot quartermaster at New Orleans, La.
8	John V. Furey	Captain and brevet major	Depot quartermaster at Omaha, Nebr., and in charge of office of chief quartermaster Department of the Platte. From November 8, 1882, to March 31, 1883.
9	Lewis C. Forsyth	Captain and brevet major	Disbursing officer at Buffalo, N. Y.

The following is a list of officers on duty as acting assistant quartermasters, and of the stations at which they have served during the fiscal year ending June 30, 1883.

B.—*List of officers on duty as acting assistant quartermasters, and of the stations at which they have served, during the fiscal year ending June* 30, 1883.

Name.	Lineal rank and regiment.	Brevet rank.	Station.	Time during year on duty as A. A. Q. M.
Adams, Thomas R...	1st lt. 5th Art.	.....	Plattsburg Barracks, N Y.	July 31, 1882, to Sept. 25, 1882.
Ames, Robert F	2d lt. 8th Inf..	.....	Fort Yuma, Cal.....	July 1, 1882, to Dec. 13, 1882.
Andrus, E. P	2d lt. 5th Cav .	.....	Fort Robinson, Nebr..	July 1, 1882, to April 1, 1883.
Avery, Frank B	2d lt. 3d Inf...	.....	Fort Missoula, Mont..	Aug. 1, 1882, to Mar. 16, 1883.
Ames, Luther S	1st lt. 2d Inf ..	.....	Fort Spokane, Wash..	Nov. 1, 1882, to June 30, 1883.
Baldwin, William H.	1st lt. 7th Cav.	.....	Fort Meade, Dak	July 1, 1882, to July 6, 1882.
Barrett, Gregory	1st lt. 10th Inf.	Colonel	Fort Wayne, Mich....	July 1, 1882, to June 30, 1883.
Brush, Daniel H	1st lt. 17th Inf.	.....	Fort Yates, Dak.....	July 1, 1882, to June 30, 1883.
Baker, Frank.....	1st lt. Ord. Dept	.....	Benicia Arsenal, Cal ..	July 1, 1882, to Apr. 30, 1883.
Blauvelt, W. F.....	2d lt. 15th Inf.	.....	Fort Lyon, Colo.....	July 1, 1882, to Nov. 30, 1882.
Byrne, B. A.....	1st lt. 6th Inf .	.....	Fort Washakie, Wyo.	July 1, 1882, to Sept. 30, 1882.
Brennan, James	1st lt. 17th Inf.	.....	Fort A. Lincoln, Dak	July 1, 1882, to Dec. 31, 1882.
Bliss, T. H.	1st lt. 1st Art.	.....	Point San José, Cal ...	July 1, 1882, to July 31, 1882.
Blunt, A. C	2d lt. 5th Art .	.....	Plattsburg Barracks, N. Y.	July 1, 1882, to July 31, 1882.
Barth, C. H	2d lt. 12th Inf.	.....	Camp Price, Ariz....	July 1, 1882, to Aug. 16, 1882.
Barry, Thomas H....	1st lt. 1st Inf .	.....	Fort Grant, Ariz	Aug. 25, 1882, to Nov. 30, 1882.
Do.....	...do	.....	..... do	Mar. 8, 1883, to June 30, 1883.
Booth, Charles A	1st lt. 1st Inf..	Lt. col ..	In the field—District of New Mex.	July 1, 1882, to Nov. 30, 1882.
Best, C. L.....	1st lt. 1st Art.	.....	Presidio of San Francisco, Cal.	July 6, 1882, to June 30, 1883.
Burbank, C. S.....	1st lt. 10th Inf.	.....	Cleveland, Ohio.....	July 1, 1882, to Aug. 24, 1882.
Do	...do	.....	..... do	Jan. 31, 1883, to Feb. 28, 1883.
Boughton, Daniel H .	2d lt. 3d Cav..	.....	In the field—Department of Arizona.	Aug. 23, 1882, to Sept. 30, 1882.
Blake, J. Y. F.....	2d lt. 6th Cav.	.....	In the field—Department of Arizona.	Aug. 23, 1872, to Sept. 30, 1882.
Ballance, John G	1st lt. 22d Inf .	.....	Fort Clark, Tex	Sept. 30, 1882, to Nov. 2, 1882.
Do.....	... do	.....	Santa Fé, N. Mex	Nov. 30, 1882, to Feb. 23, 1883.
Brereton, John J	1st lt. 24th Inf.	.....	Fort Elliott, Tex	Oct. 18, 1882, to June 30, 1883.
Budlong, A. H	2d lt. 9th Cav .	.....	Fort Hays, Kans	Nov. 1, 1882, to June 30, 1883.
Burnham, D. R	1st lt. 15th Inf.	.....	Fort Randall, Dak....	Nov. 22, 1882, to Dec. 31, 1882.
Brown, R. P	1st lt. 4th Inf .	.....	Fort Omaha, Nebr....	Dec. 18, 1882, to Jan. 15, 1883.
Do.....	... do	.....	..... do	Jan. 23, 1883, to June 30, 1883.
Bailey, H. L	2d lt. 21st Inf.	.....	Fort Townsend, Wash.	Apr. 18, 1883, to June 30, 1883.
Badger, William.....	Capt. 6th Inf..	.....	Fort Leavenworth, Kans.	June 6, 1883, to June 30, 1883.
Clark, Dillard H :...	1st lt. 15th Inf.	.....	Fort Lewis, Colo.....	July 1, 1882, to Dec. 1, 1882.
Do.....	... do	.....	Fort Randall, Dak....	Jan. 1, 1883, to June 30, 1883.
Clark, Sidney E	1st lt. 2d Inf ..	Captain	Fort Cœur d'Alene, Idaho.	July 1, 1882, to June 30, 1883.
Cotton, Gilbert P	1st lt. 1st Art.	.....	Point San José, Cal...	July 31, 1882, to Sept. 30, 1882.
Carter, W. H	1st lt. 6th Cav.	.....	Fort Apache, Ariz....	July 1, 1882, to Sept. 14. 1882.
Do.....	... do	.....	Fort Lowell, Ariz.....	Dec. 18, 1882, to June 30, 1883.
Cornman, Daniel.....	1st lt. 21st Inf.	.....	Boise Barracks, Idaho.	July 1, 1882, to July 11, 1882.
Cowles, C. D.....	1st lt. 23d Inf..	.....	Fort Bayard, N. Mex..	July 1, 1882, to Dec. 31, 1882.
Do.....	do	.....	Fort Craig, N. Mex...	Dec. 31, 1882, to June 30, 1883.
Cummings, J. F.....	1st lt. 3d Cav..	.....	Fort Verde, Ariz	Aug. 24, 1882, to Feb. 14, 1883.
Chynoweth, Edward.	2d lt. 17th Inf.	.....	Fort Sisseton, Dak....	Nov. 5, 1882, to June 30, 1883.
Carland, John	1st lt. 6th Inf..	.....	Fort Hall, Idaho.....	July 1, 1882, to Mar. 12, 1882.
Do.....	...do	.....	Fort Douglas, Utah...	Mar. —, 1883, to June 30, 1883.
Cory, William O.....	1st lt. 15th Inf.	.....	Fort A. Lincoln, Dak.	Dec. 31, 1882, to June 30, 1883.
Colladay, Samuel R..	1st lt. 10th Inf.	.....	Fort Stockton, Tex ...	July 1, 1882, to June 30, 1883.
Catley, Henry	Capt. 2d Inf...	.....	Fort Colville, Wash...	July 1, 1882, to Nov. 13, 1882.
Cornish, G. A.....	1st lt. 15th inf.	.....	Fort Pembina, Dak....	Dec. 10, 1882, to June 30, 1883.
Chamberlin, J. L.....	2d lt. 1st Art..	.....	Alcatraz Island, Cal...	July 1, 1882, to Nov. 30, 1882.
Califf, J. M.....	1st lt. 3d Art..	Captain.	Fort Brooke, Fla.....	July 1, 1882, to Nov. 11, 1882.
Cooke, George F.....	1st lt. 15th Inf.	.....	Fort Garland, Colo....	July 1, 1882, to Nov. 10, 1882.
Clarke, C. J. T.....	2d lt. 10th Inf..	.....	Cleveland, Ohio.....	July 1, 1882, to July 31, 1882.
Do.....	...do	.....	.....do	Oct. 31, 1882, to Nov. 30, 1882.
Chance, J. C.....	1st lt. 13th Inf.	.....	Fort Selden, N. Mex..	Oct. 10, 1882, to Dec. 11, 1882.
Campbell, W. J.....	1st lt. 22d Ind.	....	Fort Lewis, Colo.....	Dec. 1, 1882, to June 30, 1883.
Carrington, F. de L..	2d lt. 1st Inf...	.....	In the field—Department of Arizona.	Apr. 8, 1883, to June 30, 1883.
Capron, T. H	1st lt. 9th Inf..	.....	Fort Bridger, Wyo ...	Apr. 6, 1883, to June 30, 1883.
De Lany, C. M.....	1st lt. 15th Inf.	.....	In the field—Department of the Missouri.	July 1, 1882, to Oct. 31, 1882.
Daugherty, W. W...	Capt. 22d Inf..	.....	Fort Clark, Tex	July 1, 1882, to Sept. 30, 1882.
Davis, Edward	1st lt. 3d Art..	.....	Saint Augustine, Fla.	July 1, 1882, to June 30, 1883.
Dodge, F. L.....	1st lt. 23d Inf..	.....	Fort Leavenworth, Kans.	July 1, 1882, to Oct. 10, 1882.

B.—*List of officers on duty as acting assistant quartermasters, &c.*—Continued.

Name.	Lineal rank and regiment.	Brevet rank.	Station.	Time during year on duty as A. A. Q. M.
Dodd, George A	1st lt. 3d Cav		Fort Grant, Ariz	Nov. 30, 1882, to Feb. 6, 1883.
Drum, John	1st lt. 10th Inf		Fort Brady, Mich	July 1, 1882, to June 30, 1883.
Davis, G. B	1st lt. 5th Cav		Fort Niobrara, Nebr	July 1, 1882, to June 30, 1883.
Doane, G. C	1st lt. 2d Cav		In the field—Department of Dakota.	July 1, 1882, to Sept. 30, 1882.
Dillenback, J. W	1st lt. 1st Art	Lt. Col	Presidio of San Francisco, Cal.	July 1, 1882, to July 6, 1882.
Davis, Britton	2d lt. 3d Cav		San Carlos Agency, Ariz.	Sept. 30, 1882, to June 30, 1883.
Day, R. H	1st lt. 6th Inf		Fort Thornburgh, Utah	July 1, 1882, to Oct. 18, 1882.
Davenport, T. C	1st lt. 9th Cav		Fort Riley, Kans	Oct. 9, 1882, to June 13, 1883.
Delany, Hayden	1st lt. 9th Inf	Lt. Col	Fort McKenney, Wyo	July 1, 1882, to July 17, 1882.
Dapray, J. A	2d lt. 23d Inf		Richmond, N. Mex	July 1, 1882, to Aug. 17, 1882.
Dudley, E. S	1st lt. 2d Art		Newport Barracks, Ky	July 1, 1882, to Sept. 30, 1882.
Danes, H. C	1st lt. 3d Art		Fort Brooke, Fla	Nov. 11, 1882, to Jan. 4, 1883.
Dent, John C	1st lt. 20th Inf		Fort Hays, Kans	July 1, 1882, to Nov. 1, 1882.
Earle, R. T	2d lt. 2d Inf		Fort Lapwai, Idaho	Nov. 25, 1882, to June 30, 1883.
Ellis, E. A	2d lt. 8th Cav		Fort Ringgold, Tex	July 1, 1882, to Oct. 31, 1882.
Eastman, F. F	2d lt. 14th Inf		Camp on Snake River, Wyo.	July 1, 1882, to Sept. 30, 1882.
Earnest, C. A	1st lt. 8th Inf	Lt. Col	Fort Bidwell, Cal	July 1, 1882, to June 30, 1883.
Edwards, F. A	1st lt. 1st Cav		Fort Klamath, Oreg	July 1, 1882, to Mar. 1, 1883.
Do	do		do	Apr. 10, 1883, to June 30, 1883.
Evans, W. P	2d lt. 19th Inf		Fort Leavenworth, Kans.	Oct. 10, 1882, to June 30, 1883.
Elliott, C. P	2d lt. 13th Inf		Fort Selden, N. Mex	Dec. 11, 1882, to June 30, 1883.
Fuger, Fredk	1st lt. 4th Art	Captain	Fort Adams, R. I	July 1, 1882, to Aug. 28, 1882.
Farley, Joseph P	Maj. Ord. Dept		Kennebec Arsenal, Me	July 1, 1882, to April —, 1883.
Foote, George F	Capt. 8th Cav	Lt. Col	Jefferson Barracks, Mo	July 1, 1882, to Nov. 18, 1882.
Forbes, T. F	1st lt. 5th Inf	Lt. Col	Fort Keogh, Mont	July 1, 1882, to June 30, 1883.
Foster, F. W	2d lt. 5th Cav		Fort Laramie, Wyo	Aug. 4, 1882, to Nov. 30, 1882.
Geary, W. L	1st lt. 12th Inf		In the field—Department of Arizona.	July 1, 1882, to Aug. 23, 1882.
Do	do		Plattsburg Barracks, N. Y.	Mar. 19, 1883, to June 30, 1883.
Goodwin, M. F	1st lt. 9th Cav		Fort Riley, Kans	July 1, 1882, to July 5, 1882.
Do	do		In the field—District of New Mexico.	July 10, 1882, to July 31, 1882.
Do	do		Fort Riley, Kans	Jan. 13, 1883, to April 30, 1883.
Grealish, M. J	Capt. Ord. Dept		Augusta Arsenal, Ga	July 1, 1882, to June 30, 1883.
Getty, R. N	2d lt. 22d Inf		San Antonio, Tex	July 1, 1882, to Nov. 21, 1882.
Do	do		Fort Garland, Colo	Nov. 23, 1882, to June 30, 1883.
Griffin, Eugene	1st lt. Eng. Corps.		Willets Point, N. Y	July 1, 1882, to June 30, 1883.
Gerlach, William	1st lt. 3d Inf		Fort Missoula, Mont	July 1, 1882, to July 31, 1882.
Do	do		do	Mar. 16, 1883, to June 30, 1883.
Gatewood, C. B	2d lt. 6th Cav		In the field—Department of Arizona.	July 1, 1882, to June 30, 1883.
Grumley, E. I	2d lt. 17th Inf		Fort Sisseton, Dak	July 1, 1882, to July 31, 1882.
Godwin, E. A	1st lt. 8th Cav		Fort Clark, Tex	Nov. 2, 1882, to Dec. 31, 1882.
Do	do		Fort Duncan, Tex	Apr. 18, 1883, to June 30, 1883.
Garvey, Thomas	1st lt. 1st Cav		Fort Walla Walla, Wash.	Nov. 1, 1882, to Mar. 30, 1883.
Gardner, J. H	2d lt. 9th Cav		Fort Garland, Colo	Nov. 10, 1882, to Nov. 23, 1883.
Green, J. O	2d lt 25th Inf		Fort Hale, Dak	Nov. 21, 1882, to June 30, 1883.
Gardener, Cornelius	1st lt. 19th Inf		Fort Brown, Tex	Mar. 5, 1883, to June 30, 1883.
Gustin, J. H	2d lt. 14th Inf		Rawlins, Wyo	July 1, 1882, to June 30, 1883.
Glass, J. N	2d lt. 6th Cav		In the field—Department of Arizona.	July 1, 1882, to Aug. 23, 1882.
Glenn, E. F	2d lt. 25th Inf		Fort Hale, Dak	July 1, 1882, to Nov. 21, 1882.
Grimes, George S	1st lt. 2d Art		Gaithersburg, Md	June 26, 1883, to June 30, 1883.
Guilfoyle, John F	1st lt. 9th Cav		In the field—Department of Missouri.	June 1, 1883, to June 30, 1883.
Hoyt, George S	1st lt. 18th Inf		Fort Assinniboine, Mont.	July 1, 1882, to June 30, 1883.
Hall, W. P	1st lt. 5th Cav		Fort Laramie, Wyo	July 1, 1882, to Aug. 4, 1882.
Do	do		Fort Sidney, Nebr	Sept. 2, 1882, to June 30, 1883.
Hutton, James A	2d lt. 8th Inf		Fort Yuma, Cal	Dec. 13, 1882, to May 20, 1883.
Hoyt, R. W	1st lt. 11th Inf		Fort Sully, Dak	July 1, 1882, to June 30, 1883.
Heistand, H. O. S	2d lt. 11th Inf		Camp Poplar River, Mont.	Aug. 26, 1882, to June 30, 1883.
Hare, L. R	1st lt. 7th Cav		Fort Meade, Dak	July 6, 1882, to June 30, 1883.
Howe, Walter	1st lt. 4th Art		Fort Warren, Mass	Sept. 30, 1882, to June 30, 1883.
Hoffman, William	1st lt. 11th Inf		Fort Bennett, Dak	July 1, 1882, to Oct. 16, 1882.
Hasson, Patrick	1st lt. 14th Inf		Cantonment on the Uncompahgre, Colo.	July 1, 1882, to June 30, 1883.
Hardin, E. E	1st lt. 7th Inf		Fort Snelling, Minn	July 1, 1882, to Nov. 21, 1882.
Do	do		Fort Laramie, Wyo	Nov. 30, 1882, to June 30, 1883.
Hyde, J. McE	1st lt. 8th Inf	Colonel	Fort Bowie, Ariz	July 1, 1882, to Sept. 1, 1882.
Hobbs, Charles W	1st lt. 3d Art	Captain	Fort Barrancas, Fla	July 1, 1882, to May 1, 1883.

B.—*List of officers on duty as acting assistant quartermasters, &c.*—Continued.

Name.	Lineal rank and regiment.	Brevet rank.	Station.	Time during year on duty as A. A. Q. M.
Hamner, William H..	1st lt. 20th Inf.	.....	Fort Gibson, Ind. T...	July 1, 1882, to June 30, 1883.
Hodges, C. L.....	1st lt. 25th Inf.	.....	Fort Randall, Dak....	July 1, 1882, to Nov. 22, 1882.
Do.....	....do	.....	Fort Snelling, Minn ..	Dec 19, 1882, to June 30, 1883.
Homer, W. B.....	1st lt. 5th Art.	.....	Fort Schuyler, N. Y..	July 1, 1882, to June 30, 1883.
Hay, Charles	1st lt. 23d Inf.	.....	Fort Bliss, Tex.....	July 1, 1882, to June 30, 1883.
Hall, Charles S.....	2d lt. 13th Inf.	.....	In the field—District of New Mexico.	July 1, 1882, to Dec. 31, 1882.
Huston, J. F.....	1st lt. 20th Inf.	.....	Fort Reno, Ind. Ter..	July 1, 1882, to June 30, 1883.
Harmon, M. F.....	2d lt. 1st Art..	.....	Fort Stevens, Oreg ...	Aug. 8, 1882, to June 30, 1883.
Hodgson, F. G.....	2d lt. 6th Cav.	.....	Fort Apache, Ariz ...	Sept. 14, 1882, to Dec. 1, 1882.
Hinton, Charles B...	1st lt. 18th Inf.	.....	Fort Maginnis, Mont .	Nov. 10, 1882, to May 7, 1883.
Honeycutt, J. T.....	1st lt. 1st Art.	.....	Alcatraz Island, Cal..	Dec. 1, 1882, to June 30, 1883.
Humphreys, Charles.	1st lt. 3d Art..	.....	Fort Barrancas, Fla ..	May 1, 1883, to June 30, 1883.
Hunter, Geo. K.....	1st lt. 3d Cav..	.....	Fort Bowie, Ariz	May 15, 1883, to June 30, 1883.
Ingalls, Charles H...	1st lt. 6th Inf..	.....	Fort Hall, Idaho.....	Mar. 8, 1883, to May 1, 1883.
Johnson, F. O.....	2d lt. 3d Cav..	.....	Fort Grant, Ariz.....	Feb. 6, 1883, to Mar. 8, 1883.
Jones, F. B	1st lt. 3d Inf...	.....	Fort Shaw, Mont	July 1, 1882, to Dec. 1, 1882.
Do.....	....do	.....	.....do	June 1, 1883, to June 30, 1883.
Do.....	2d lt. 22d Inf..	.....	Pagosa Springs, Colo .	Jan. 1, 1883, to Jan. 31, 1883.
Jones, S. R.....	1st lt. 4th Art..	.....	Fort Warren, Mass...	July 1, 1882, to Sept. 30, 1882.
Johnson, C. P.....	2d lt. 4th Inf..	.....	Fort Fred Steele, Wyo	July 1, 1882, to Oct. 16, 1882.
Do...	....do	.....	Fort Robinson, Nebr..	April 1, 1883, to June 30, 1883.
Johnson, A. B	1st lt. 7th Inf..	.....	Fort Bridger, Wyo...	Jan. 1, 1883, to April 6, 1883.
Kernan, F. J.....	2d lt. 21st Inf..	.....	Fort Klamath, Oreg...	Mar. 1, 1883, to Apr. 10, 1883.
Kelton, D. H.....	1st lt. 10th Inf.	.....	Fort Mackinac, Mich.	July 1, 1882, to June 30, 1883.
Kane, John I.....	1st lt. 24th Inf.	.....	Fort Supply, Ind. Ter.	July 1, 1882, to Nov. 1, 1882.
Knower, E. C	1st lt. 3d Art..	Captain.	Jackson Barracks, La.	July 1, 1882, to June 30, 1883.
Kendall, H. M.....	Capt. 6th Cav.	.....	Fort Grant, Ariz	July 1, 1882, to Aug. 31, 1882.
Do.....	....do	.....	Fort Apache, Ariz....	Dec. 1, 1882, to June 30, 1883.
Knox, Thomas T.....	1st lt. 1st Cav .	.....	Fort McDermit, Nev..	July 1, 1882, to Sept. 30, 1882.
Kobbe, W. A	1st lt. 3d Art..	Lt. Col..	Mount Vernon Barracks, Ala.	July 1, 1882, to Dec. 31, 1882.
Kendrick, F. M. H...	1st lt. 7th Inf..	.....	Fort Buford, Dak	July 1, 1882, to Aug. 5, 1882.
Do.....	....do	.....	Fort Pembina, Dak....	Aug. 19, 1882, to Dec. 10, 1882.
Kerr, J. T.....	2d lt. 17th Inf.	.....	Fort Stevenson, Dak..	Nov. 7, 1882, to Dec. 26, 1882.
Kennon, L. W. V.....	2d lt. 6th Inf..	.....	Fort Thornburgh, Utah	Oct. 8, 1882, to Mar. 26, 1883.
Leggett, H. F.....	1st lt. 24th Inf.	Captain.	Fort Sill, Ind. Ter	July 13, 1882, to Jan. 1, 1883.
Lord, Thomas W	1st lt. 20th Inf.	.....	Fort Leavenworth, Kans.	Oct. 30, 1882, to June 30, 1883.
Landis, J. F. R.....	2d lt. 1st Cav..	.....	Fort Lapwai, Idaho...	July 1, 1882, to Dec. 1, 1882.
Morgan, A. S. M.....	Capt. Ord. Dept	.....	Allegheny Arsenal, Pa.	July 1, 1882, to June 30, 1883.
Myer, A. L	1st lt. 11th Inf.	.....	Fort Bennett, Dak....	Oct. 16, 1882, to June 30, 1883.
Miller, C. P	1st lt. 4th Art ..	.....	Fort Preble, Me	July 1, 1882, to June 30, 1883.
Morgan, George H...	2d lt. 3d Cav ..	.....	Fort Verde, Ariz	Feb. 14, 1883, to June 30, 1883.
McGinness, J. R	Maj. Ord. Dept	.....	Saint Louis Powder Depot, Mo.	July 1, 1882, to June 30, 1883
Miller, W. H	1st lt. 1st Cav .	.....	Fort Walla Walla, Wash.	July 1, 1882, to Nov. 1, 1882.
Mott, Wallace	1st lt. 8th Inf..	.....	Angel Island, Cal.....	July 1, 1882, to June 30, 1883.
Miner, C. C	2d lt. 9th Inf ..	.....	Fort Fred Steele, Wyo.	Oct. 16, 1882, to Mar. 1, 1883.
Maney, J. A	2d lt. 15th Inf .	.....	Fort Stevenson, Dak ..	Dec. 26, 1882, to June 30. 1883.
Mason, J. S	2d lt. 1st Inf ..	.....	Fort Thomas, Ariz ...	Aug. 7, 1882, to Sept. 4, 1883.
Mansfield, F. W	1st lt. 11th Inf.	.....	Fort Buford, Dak	Aug. 5, 1882, to Mar. 1, 1883.
McCaleb, T. S.....	2d lt. 9th Inf ..	.....	Fort McKinney, Wyo.	July 26, 1882, to Oct. 1, 1882.
Maxon, M. M	1st lt. 10th Cav	.....	Fort Concho, Tex.....	July 1, 1882, to Aug. 11, 1882.
Do.....	....do	.....	Fort Davis, Tex	Nov. 1, 1882, to Mar. 27, 1883.
Michaelis, O. E	Capt. Ord. Dept	.....	Frankford Arsenal, Pa.	July 1, 1882, to June 30, 1883,
Manley, J. A.....	1st lt. 20th Inf.	.....	Fort Riley, Kans	July 5, 1882, to Oct. 9, 1882.
Mitcham, O. B	1st lt. Ord. Dept	.....	Rock Island Arsenal, Ill.	July 1, 1882, to June 30, 1883.
Morrison, C. C	1st lt. Ord. Dept	.....	Springfield, Mass.....	July 1, 1882, to June 30, 1883.
Mills, F. H	1st lt. 24th Inf	.....	Fort Elliott, Tex.....	July 1, 1882, to Oct. 15, 1882.
Do.....	....do	.....	Fort Supply, Ind. Ter.	Nov. 1, 1882, to June 30, 1883.
Mumford, T. S.....	1st lt. 13th Inf.	.....	Fort Wingate N. Mex.	July 1, 1882, to June 30, 1883.
McCarthy, D. E.....	2d lt. 12th Inf .	.....	Plattsburg Barracks, N. Y.	Sept. 25, 1882, to Mar. 19, 1883.
Mason, C. W.....	1st lt. 4th Inf..	.....	Fort Fetterman, Wyo.	July 1, 1882, to July 19, 1882.
Miller, S. W	2d lt. 5th Inf ..	.....	Camp Poplar River, Mont.	July 1, 1882, to Aug. 31, 1882.
Mitchell, William....	1st lt. 3d Inf ..	Captain	Fort Ellis, Mont.....	July 1, 1882, to May 3, 1883.
Mills, S. M.....	1st lt. 5th Art.	.....	Fort Columbus, N. Y. H.	July 1, 1882, to Nov. 30, 1882.
Newton, John	2d lt. 16th Inf.	.....	Fort McKavett, Tex..	Aug. 3, 1882, to Nov. 13, 1882.
Do.....	....do	.....	San Antonio, Tex	Nov. 21, 1882, to June 30, 1883.
Nickerson, J. D	2d lt. 17th Inf.	.....	Fort Totten, D. T.....	July 1, 1882, to Oct. 10, 1882.
O'Brien, John J	1st lt. 4th Inf .	.....	Fort D. A. Russell, Wyo.	Aug. 20, 1882, to Sept. 30, 1882.
Do.....	....do	.....	Fort McKinney, Wyo.	Oct. 1, 1882, to June 3, 1883.

B.—*List of officers on duty as acting assistant quartermasters, &c.*—Continued

Name.	Lineal rank and regiment.	Brevet rank.	Station.	Time during year on duty as A. A. Q. M.
Osgood, H. B	1st lt. 3d Art		Little Rock Barracks, Ark.	Oct. 31, 1882, to June 30, 1883.
Olmsted, George T	Capt. U. S. A.		Whipple Barracks, Ariz.	Nov. 13, 1882, to June 30, 1883.
Olmsted, J. A	1st lt. 9th Cav.		Fort Riley, Kans	Apr. 30, 1883, to June 30, 1883.
Penney, Charles G	1st lt. 6th Inf.	Captain	Fort Douglas, Utah	July 1, 1882, to Mar. 11, 1883.
Do	do		Fort Thornburgh, Utah.	Mar. 21, 1883, to June 30, 1883.
Patterson, Geo. T. T	2d lt. 14th Inf.		Camp on White River, Col.	July 1, 1882, to June 30, 1883.
Patch, A. M	1st lt. 4th Cav.		Santa Fé, N. Mex	July 1, 1882, to Nov. 30, 1882.
Do	do		Fort Bayard, N. Mex.	Dec. 31, 1882, to June 30, 1883.
Palmer, A. M	2d lt. 24th Inf.		Fort Sill, Ind. Ter	July 1, 1882, to July 13, 1882.
Phister, Nat	2d lt. 1st Inf		Fort Mojave, Ariz	Aug. 27, 1882, to June 30, 1883.
Pitcher, W. L	2d lt. 8th Inf.		Benicia Barracks, Cal.	July 1, 1882, to June 18, 1883.
Powell, J. W	1st lt. 8th Inf		San Diego Barracks, Cal.	July 1, 1882, to Aug. 31, 1882.
Do	do		do	Oct. 16, 1882, to June 30, 1883.
Patterson, R. H	1st lt. 1st Art.		Fort Canby, Wash	July 1, 1882, to Oct. 23, 1882.
Phelps, F. E	1st lt. 8th Cav.		Fort McIntosh, Tex	July 1, 1882, to April 17, 1883.
Peshine, J. H. H	1st lt. 13th Inf.		Fort Selden, N. Mex	July 1, 1882, to Oct. 10, 1882.
Do	do		Fort Cummings, N. Mex.	Oct. 20, 1882, to June 30, 1883.
Perrine, H. P	1st lt. 6th Cav.		Fort Bowie, Ariz	Sept. 1, 1882, to Nov. 10, 1882.
Pitman, John	Capt. Ord. Dept		Watertown Arsenal, Mass.	July 1, 1882, to June 30, 1883
Pearson, Daniel C	1st lt. 2d Cav.		Fort Custer, Mont	July 1, 1882, to June 30, 1883.
Potts, R. D	1st lt. 3d Art.		Little Rock Barracks, Ark.	July 1, 1882, to Oct. 31, 1882.
Do	do		Mount Vernon Barracks, Ala.	Dec. 31, 1882, to June 30, 1883.
Patten, F. J	2d lt. 21st Inf.		Boisé Barracks, Idaho.	July 11, 1882, to Jan. 31, 1883.
Porter, J. M	1st lt. 3d Cav.		Fort Thomas, Ariz	Sept. 11, 1882, to June 30, 1883.
Paulding, William	1st lt. 10th Inf.		Cleveland, Ohio	Aug. 24, 1882, to Sept. 30, 1882.
Do	do		do	Dec. 30, 1882, to Jan. 31, 1883.
Do	do		do	May 30, 1883, to June 30, 1883.
Phipps, F. H	Maj. Ord. Dept.		Kennebec Arsenal, Me.	Apr. 16, 1883, to June 30, 1883.
Quinton, William	1st lt. 7th Inf.		Fort Fred Steele, Wyo.	Mar. 1, 1883, to June 30, 1883.
Rice, W. F	1st lt. 23d Inf.		Lordsburg, N. Mex	July 1, 1882, to July 30, 1882.
Regan, James	1st lt. 9th Inf.		Fort Omaha, Nebr	July 1, 1882, to Aug. 15, 1882.
Do	do		Fort D. A. Russell, Wyo.	Sept. 30, 1882, to June 30, 1883.
Reilly, H. J	1st lt. 5th Art		Governor's Island, N. Y. H.	Nov. 30, 1882, to June 30, 1883.
Robinson, Daniel	1st lt. 7th Inf.		Cantonment Bad Lands, Dak.	July 1, 1882, to Nov. 4, 1882.
Richards, W. V	1st lt. 16th Inf.	Captain	Fort McKavett, Tex.	July 1, 1882, to Aug. 3, 1882.
Do	do	do	Fort Concho, Tex	Aug. 11, 1882, to Mar. 1, 1883.
Rose, John M	1st lt. 21st Inf.		Vancouver Barracks, Wash.	July 1, 1882, to June 30, 1883.
Rexford, W. H	Capt. Ord. Dept		Indianapolis Arsenal, Ind.	July 1, 1882, to June 30, 1883.
Reynolds, Alfred	1st lt. 20th Inf.		Fort Leavenworth, Kans.	July 1, 1882, to Nov. 30, 1882.
Rockwell, James, jr.	1st lt. Ord. Dept		Ordnance Depot, Fort A. Lincoln, Dak.	July 1, 1882, to June 30, 1883.
Rowan, A. S	2d lt. 15th Inf.		Pagosa Springs, Colo.	July 1, 1882, to Dec. 31, 1882.
Reed, H. A	1st lt. 2d Art.		Fort McHenry, Md	July 1, 1882, to Nov. 8, 1882.
Reynolds, Bainbridge	1st lt. 3d Cav.		Whipple Barracks, Ariz.	Aug. 31, 1882, to Sept. 30, 1882.
Do	do		do	Dec. 31, 1882, to April 1, 1883.
Ripley, H. L	2d lt. 24th Inf.		Fort Sill, Ind. Ter	Jan. 1, 1883, to June 30, 1883.
Russell, A. H	1st lt. Ord. Dept		Benicia Arsenal, Cal.	Apr. 30, 1883, to June 30, 1883.
Russell, A. J	1st lt. 7th Cav.		Fort Totten, Dak	Apr. 16, 1883, to June 30, 1883.
Randolph, B. H	1st lt. 3d Art.		Jackson Barracks, La.	May 31, 1883, to June 30, 1883.
Roe, F. W	1st lt. 3d Inf.		Fort Ellis, Mont	May 3, 1883, to June 30, 1883.
Stiles, D. F	1st lt. 10th Inf.		Fort Porter, N. Y	July 1, 1882, to June 30, 1883.
Scott, George L	1st lt. 6th Cav.		Fort Verde, Ariz	July 1, 1882, to Aug. 24, 1882.
Do	do		Fort McDowell, Ariz	Sept. 4, 1882, to June 30, 1883.
Scott, John	1st lt 4th Inf.	Major	Fort Saunders, Wyo.	July 1, 1882, to July 7, 1882.
Do	do	do	Fort Omaha, Nebr	Aug. 15, 1882, to Dec. 18, 1882.
Do	do	do	do	Jan. 15, 1883, to Jan. 31, 1883.
Shoemaker, F. L	Capt. 4th Cav		Fort Stanton, N. Mex.	July 1, 1882, to Aug. 31, 1882.
Simpson, J. F	1st lt. 3d Cav.	Captain	Fort D. A. Russell, Wyo.	July 1, 1882, to Aug. 20, 1882.
Do	do	do	Whipple Barracks, Ariz.	Sept. 30, 1882, to Dec. 31, 1882.
Do	do	do	do	Apr. 1, 1883, to June 30, 1883.
Starr, C. G	2d lt. 1st Inf.		Camp Price, Ariz	Aug. 16, 1882, to Oct. 27, 1882
Do	do		Fort Bowie, Ariz	Nov. 10, 1882, to May 15, 1883.
Strother, L. H	2d lt. 1st Inf.		Fort Lowell, Ariz	July 4, 1882, to Dec. 18, 1882.

B.—*List of officers on duty as acting assistant quartermasters, &c*—Continued.

Name.	Lineal rank and regiment.	Brevet rank.	Station.	Time during year on duty as A. A. Q. M.
Smith, Sebree	1st lt. 2d Art		Washington Barracks, D. C.	July 4, 1882, to June 30, 1883.
Shaw, R. G	1st lt. 1st Art	Captain	Fort Stevens, Oreg	July 1, 1882, to Aug. 8, 1882.
Stevens, R. R	2d lt. 6th Inf		Fort Cameron, Utah	July 1, 1882, to May 1, 1883.
Summerhayes, J. W	1st lt. 8th Inf	Major	Fort Halleck, Nev	Aug. 1, 1882, to Feb. 28 1883.
Sharp, F. D	2d lt. 20th Inf		Fort Dodge, Kans	July 1, 1882, to Oct. 2, 1882.
Stotsenburg, J. M	2d lt. 6th Cav		In the field—Department of Arizona.	July 1, 1882, to Sept. 30, 1882.
Swift, James A	2d lt. Signal Corps.		Fort Myer, Va	July 1, 1882, to June 30, 1882.
Seyburn, S. Y	2d lt. 10th Inf		Cleveland, Ohio	Sept. 30, 1882, to Oct. 31, 1882.
Do	do		do	Feb. 28, 1883, to Mar. 26, 1883.
Schuyler, W. S	1st lt. 5th Cav		Fort Sidney, Nebr	July 1, 1882, to Sept. 2, 1882.
Stafford, John	2d lt. 8th Inf		Fort Halleck, Nev	July 1, 1882, to Aug. 1, 1882.
Do	do		Benicia Barracks, Cal	June 18, 1883, to June 30, 1883.
Sickel, H. G., jr	2d lt. 7th Cav		Fort Sisseton, Dak	July 31, 1882, to Nov. 11, 1882.
Sage, W. H	2d lt. 5th Inf		Cantonment Bad Lands Dak.	Nov. 4, 1882, to Feb. —, 1883.
Stewart, W. F	1st lt. 4th Art		Fort Snelling, Minn	Nov. 21, 1882, to Dec. 19, 1882.
Smith, Charles, jr	2d lt. 8th Inf		Fort Halleck, Nev	Feb. 28, 1883, to June 30, 1883.
Shelby, I. O	1st lt. 16th Inf		Fort Concho, Tex	Mar. 1, 1883, to June 30, 1883.
Sladen, J. A	1st lt 14t Inf	Captain	Omaha, Nebr	Feb. 1, 1883, to June 30, 1883.
Sparrow, S. E	2d lt. 21st Inf		In the field—Department of Columbia.	Apr. 17, 1883, to May 7, 1883.
Stivers, C. P	2d lt. 9th Inf		In the field—Department of the Platte.	June 6, 1883, to June 30, 1883.
Sands, George H	2d lt. 6th Cav		Fort Huachuca, Ariz	May 4, 1883, to June 30, 1883.
Taylor, A. H. M	1st lt. 19th Inf		Fort Ringgold, Tex	Nov. 1, 1882, to June 30, 1883.
Thomas, E. D	1st lt. 5th Cav		Omaha, Nebr	July 1, 1882, to Feb. 1, 1883.
Truitt, Charles M	2d lt. 21st Inf		Fort Townsend, Wash	July 1, 1882, to April 18, 1883.
Tyler, W. W	1st lt. 13th Inf		Fort Craig, N. Mex	July 1, 1882, to Dec. 31, 1882.
Thies, Frederick	2d lt. 3d Inf		Fort Shaw, Mont	Dec. 1, 1882, to June 1, 1883.
Totten, C. A. L	1st lt. 4th Art		Madison Barracks, N. Y.	July 1, 1882, to Sept. 20, 1882.
Thorp, Frank	1st lt. 5th Art		Fort Hamilton, N. Y	July 1, 1882, to June 30, 1883.
Terrett, C. P	2d lt. 8th Inf		Fort McDermit, Nev	Oct. 1, 1882, to June 30, 1883.
Tompson, J. T	2d lt. 2d Art		Newport Barracks, Ky	Sept. 30, 1882, to June 30, 1883.
Thurston, W. A	2d lt. 16th Inf		Fort McKavett, Tex	Nov. 13, 1882, to June 30, 1883.
Thompson, R. E	2d lt. 6th Inf		Fort Washakie, Wyo	Sept. 30, 1882, to June 30, 1883.
Ulio, James	1st lt. 2d Inf	Major	Fort Spokane, Wash	July 1, 1882, to Nov. 1, 1882.
Van Orsdale, J. T	1st lt. 7th Inf		Fort Stevenson, Dak	July 1, 1882, to Nov. 7, 1882.
Vedder, S. C	1st lt. 19th Inf	Major	Fort Clark, Tex	Dec. 31, 1882, to June 30, 1883.
Van Vliet, R. C	2d lt. 10th Inf		Cleveland, Ohio	Nov. 30, 1882, to Dec. 30, 1882.
Do	do		do	Apr. 30, 1883, to May 31, 1883.
Wotherspoon, W. W	1st lt. 12th Inf		Whipple Depot, Ariz	July 1, 1882, to July 31, 1882.
Do	do		Madison Barracks, N. Y.	Sept. 20, 1882, to June 30, 1883.
Wilson, R. H	2d lt. 8th Inf		Fort Gaston, Cal	July 1, 1882 to June 30, 1883.
Wilson, James L	2d lt. 4th Art		Fort Trumbull, Conn	July 1, 1882, to June 30, 1883.
Wood, P. G	1st lt. 12th Inf		Fort Mojave, Ariz	July 1, 1882, to Sept. 1, 1882.
Do	do		Fort Niagara, N. Y	Sept. 18, 1882, to June 30, 1883.
Waltz, M. F	2d lt. 12th Inf		Fort McDowell, Ariz	July 1, 1882, to Sept. 4, 1882.
Wolf, Silas A	2d lt. 4th Inf		Fort Bridger, Wyo	July 1, 1882, to Jan. 1, 1883.
Ward, F. K	1st lt. 1st Cav		In the field—Department of Arizona.	July 1, 1882, to Nov. —, 1882.
Wetherill, A. M	1st lt. 6th Inf		Fort Douglas, Utah	Dec. 16, 1882, to Jan. 16, 1883.
Do	do		Ogden, Utah	May 20, 1883, to June 6, 1883.
West, Frank	1st lt. 6th Cav		In the field—Department of Arizona.	July 2, 1882, to July 9, 1882.
Do	do		do	April 8, 1883, to June 13, 1883.
Webster, J. McA	1st lt. 22d Inf		Fort Lyon, Col	Nov. 30, 1882, to June 30, 1883.
Wills, John H	2d lt. 22d Inf		Fort Duncan, Tex	July 1, 1882, to Nov. 11, 1882.
Wheeler, Frank	1st lt. 4th Cav		Richmond, N. Mex	April 5, 1883, to June 30, 1883.
Whistler, G. N	1st lt. 5th Art		Fort Niagara, N. Y	July 1, 1882, to Sept. 18, 1882.
Do	do		Fort Wadsworth, N. Y	Oct. 15, 1882, to June 30, 1883.
Woodward, S. L	1st lt. 10th Cav	Major	Fort Davis, Tex	July 1, 1882, to Nov. 1, 1882.
White John V	2d lt. 1st Art		Fort Winfield Scott, Cal.	July 1, 1882, to June 30, 1883.
Webster, Isaac T	1st lt. 1st Art		Fort Mason, Cal	Sept. 30, 1882, to June 30, 1883.
Waterman, J. C	2d lt. 7th Cav		Fort Totten, Dak	Oct. 10, 1882, to April 10, 1883.
Williams, R. A	1st lt. 8th Cav		Fort Duncan, Tex	Nov. 11, 1882, to April 18, 1883.
Wittich, Willis	1st lt. 21st Inf		Fort Canby, Wash	Oct. 23, 1882, to June 1, 1883.
Williams, W. M	1st lt. 19th Inf	Major	Fort McIntosh, Tex	April 17, 1883, to June 15, 1883.
Wainwright, R. P. P.	1st lt. 1st Cav		In the field—Department of Columbia.	May 7, 1883, to June 30, 1883.
Young, Daniel J	Capt. O. Dept		Watervliet Arsenal, N. Y.	July 1, 1882, to June 30, 1883.

A large number of officers still continue to press the urgent need of the services of post-quartermaster sergeants and the establishment of this grade of non-commissioned officers for permanent duty at the several military posts, also the necessity of a more liberal construction of the law regulating extra-duty pay at the various posts, giving acting assistant quartermasters the necessary clerks at an adequate compensation.

The following recommendations in relation to quartermaster sergeants and extra-duty clerks are taken from annual reports for the fiscal year ending June 30, 1883.

Capt. J. M. Marshall, assistant quartermaster United States Army, states:

The importance of post-quartermaster sergeants, of the same status as ordnance and commissary sergeants, cannot be overestimated.

Capt. A. E. Miltimore, assistant quartermaster, United States Army, renews his recommendation of former years, "that the grade of post, quartermaster sergeants be created."

Capt. Charles W. Williams, assistant quartermaster, United States Army, recommends that quartermaster sergeants on same basis as commissary sergeants be obtained for the Department; there being no assistant so necessary to a successful and economical administration as a good non-commissioned officer of that grade.

Capt. C. A. H. McCauley, assistant quartermaster, United States Army, recommends the passage of the act of Congress in regard to the quartermaster's non-commissioned staff similar to that of the Subsistence and Ordnance Departments.

First Lieut. William Gerlach, Third Infantry, post quartermaster, Fort Missoula, Mont., states:

The duties of quartermaster sergeants at posts are of the most responsible character. They should be allowed extra-duty pay and the best non-commissioned officers thereby induced to seek the place.

First Lieut. C. P. Miller, Fourth Artillery, post quartermaster, Fort Preble, Me., states:

The necessity for a quartermaster sergeant at each post is the only thing I would urge.

First Lieut. James Regan, regimental quartermaster, Ninth Infantry, post quartermaster, Fort D. A. Russell, Wyo., recommends that acting quartermasters be allowed a clerk, either a citizen or a competent enlisted man; and if the latter, that they be allowed 35 cents per diem.

First Lieut. A. H. M. Taylor, Nineteenth Infantry, post quartermaster, Fort Ringgold, Tex., recommends a more liberal provision for extra-duty pay at the various posts, giving post quartermasters the necessary clerks at an adequate compensation.

First Lieut. J. T. Honeycutt, First Artillery, acting assistant quartermaster, Alcatraz Island, Cal., recommends that there be appointed permanent quartermaster sergeants, the clerical work and care of property in the Quartermaster's Department being of a much more complicated and responsible nature than that performed by commissary sergeants.

First Lieut. Eugene A. Ellis, Eighth Cavalry, United States Army, recommends the appointment of quartermaster sergeants, stating that very many young officers are yearly forced to perform the duties of post quartermaster, and that, if he has no experience and no reliable person to assist him, it will take him about two years to untangle his accounts for first quarter.

First Lieut. Charles W. Hobbs, Third Artillery, United States Army, states:

An acting quartermaster sergeant and a clerk are assistants, the absolute necessity for which should be officially recognized. Their detail should be authorized by orders andreg ulations, and the acting quartermaster sergeant should receive extra-duty pay.

First Lieut. Rufus P. Brown, Fourteenth Infantry, acting assistant quartermaster, Fort Omaha, Nebr., recommends that the grade of post-quartermaster sergeant be established, beliving that it would be for the interests of the department, for the care and preservation of public property.

First Lieut. Charles Humphreys, Third Artillery, acting assistant quartermaster, Fort Barrancas, Fla., recommends that until quartermaster sergeants are provided by law, non-commissioned officers acting as such be authorized to receive extra-duty pay as overseers.

First Lieut. William Quinton, Seventh Infantry, acting assistant quartermaster, Fort Fred Steele, Wyo., recommends that efforts be made to supply officers of the line, temporarily serving in the Quartermaster's Department intelligent skilled clerical assistance in their office duties, by the appointment of a superior class of non-commissioned officers as quartermaster sergeants.

First Lieut. John H. H. Peshine, Thirteenth Infantry, acting assistant quartermaster, Fort Cummings, N. Mex., recommends a system of permanent details, under general orders, from the Army at large, or in other ways, to supply the present need of quartermaster sergeants and experienced clerical assistance in the preparation, making, and keeping of the records, returns, &c., of the Department, and the care, issue, and preservation of the public stores.

First Lieut. Patrick Hasson, Fourteenth Infantry, acting assistant quartermaster, cantonment on the Uncompahgre, Colo., recommends a more liberal interpretation of law or regulation in the allowance of clerical labor to acting assistant quartermasters, and in the absence of a grade corresponding to that of commissary sergeants in the Subsistence Department, suggests a modification of existing orders so that a non-commissioned officer can be detailed either on extra or daily duty as post quartermaster sergeant in addition to that of overseer.

First Lieut. J. A. Olmsted, Ninth Cavalry, acting assistant quartermaster, Fort Riley, Kans., says:

I earnestly recommend the appointment of post-quartermaster sergeants. They would be a great assistance to acting assistant quartermasters. The commissary sergeants have worked a great saving to the Government and relief to acting assistant commissaries. How much more necessary are post-quartermaster sergeants, for the Subsistence Department is much more compact and easier run than the Quartermaster's Department.

First Lieut. C. D. Cowles, Twenty-third Infantry, acting assistant quartermaster, Fort Craig, N. Mex., recommends that quartermaster sergeants be authorized with same status as commissary sergeants.

First Lieut. Walter Howe, Fourth Artillery, acting assistant quartermaster, Fort Warren, Mass., suggests that in his opinion it would be a saving to the Government to have a quartermaster sergeant at every military post, in the same way that commissary sergeants are now furnished.

First Lieut. Cornelius Gardener, Nineteenth Infantry, acting assistant quartermaster, Fort Brown, Tex., states:

From my experience in the Quartermaster's Department, I am of the opinion that The most urgent necessity exists for the appointment of quartermaster sergeants. they are needed wherever a quartermaster is.

First Lieut. William L. Geary, Twelfth Infantry, acting assistant quartermaster, Plattsburg Barracks, N. Y., recommends that a quartermaster sergeant be appointed for each permanent military post and camp on the same footing as a commissary sergeant.

First Lieut. W. W. Wotherspoon, Twelfth Infantry, acting assistant quartermaster, Madison Barracks, New York, recommends the formation of a corps of experienced non-commissioned officers as quartermaster sergeants with the pay and allowances of commissary sergeants.

First Lieut. Willis Wittich, Twenty-first Infantry, United States Army, recommends the creation of a corps of post quartermaster sergeants whose duties would correspond to those of commissary and ordnance sergeants.

First Lieut. D. H. Kelton, Tenth Infantry, acting assistant quartermaster, Fort Mackinac, Mich., recommends for the better interest of the service that the grade of quartermaster sergeant be created.

Second Lieut. C. P. Terrett, Eighth Infantry, acting assistant quartermaster, Fort McDermit, Nev., states that in his opinion quartermaster sergeants are necessary for the care of quartermasters' property, and that their appointment would be most beneficial to the service.

Second Lieut. N. P. Phister, First Infantry, acting assistant quartermaster, Fort Mojave, Ariz., recommends the appointment of quartermaster sergeants, thus securing greater accuracy and facility in doing business, by having a class of men thoroughly informed in all the routine of the Department.

QUARTERMASTER GENERAL'S OFFICE, INSPECTION BRANCH,
October 1, 1883.

Amounts estimated for by disbursing officers of the Quartermaster's Department from appropriations for the fiscal year 1882–'83.

Military divisions, departments, &c.	Regular supplies.	Incidental expenses.	Cavalry and artillery horses.	Barracks and quarters.	Transportation of the Army and its supplies.	Clothing, camp and garrison equipage.	Construction and repair of hospitals.	National cemeteries.	Pay of superintendents of national cemeteries.	Road from Mound City to the national military cemetery, Illinois.	Road from New Albany to the national cemetery, Indiana.
Department of the East	$151,283 52	$62,196 13	$7,025 00	$68,141 95	$115,180 74	$334 60	$11,348 44	$12,096 55	$18,372 98	.....	.....
Department of the South	41,182 44	22,850 67	1,530 00	31,559 60	53,073 59	189 00	5,896 91	30,183 91	26,561 86	.....	.....
Total Military Division of the Atlantic	192,465 96	85,046 80	8,555 00	99,701 55	168,254 33	523 60	17,245 35	42,280 46	44,934 84	.....	.....
Headqu'rs Military Division of the Missouri	93,357 78	52,722 97	.....	37,776 21	467,433 69	3,167 45	.....	994 45	130 00	.....	.....
Department of the Missouri	639,677 28	109,899 24	37,532 00	126,020 00	905,641 97	681 66	11,081 14	6,285 11	6,968 67	.....	.....
Department of Dakota	769,723 82	100,046 81	41,600 00	73,793 15	590,160 97	1,616 00	16,870 54	.....	.....	.....	.....
Department of the Platte	410,721 44	93,563 63	24,275 00	55,334 38	432,785 21	630 00	6,736 07	405 00	1,500 00	.....	.....
Department of Texas	385,366 85	56,373 84	34,177 00	42,850 35	154,566 96	38 80	594 43	705 81	1,582 00	.....	.....
Total Military Division of the Missouri	2,298,847 17	412,606 49	137,584 00	335,774 09	2,550,588 80	6,133 91	35,282 18	8,390 37	10,180 67	.....	.....
Military Division of the Pacific	776,715 82	143,169 65	83,536 50	197,730 44	728,901 34	100 00	23,258 82	.....	.....	.....	.....
Depot at San Francisco	1,320 00	10,000 00	.....	9,999 96	800 00	182,461 87	.....	.....	.....	.....	.....
Depot at Washington	106,678 57	70,797 95	.....	119,601 40	43,874 82	63 25	24 00	45,091 85	4,245 00	10,000 00	.....
Depot at Philadelphia	11,000 42	21,650 62	.....	5,867 02	69,241 36	1,010,538 37	.....	1,650 44	.....	.....	.....
Depot at New York	37,855 24	30,214 75	.....	28,994 88	184,169 50	125 00	.....	125 90	.....	.....	.....
Depot at Jeffersonville	59,195 53	30,133 02	.....	12,623 76	66,188 88	73,532 37	.....	275 48	650 00	.....	12,000 00
Columbus Barracks	9,808 80	3,313 05	.....	7,691 52	30,899 00	.....	265 00	.....	.....	.....	.....
Jefferson Barracks	3,864 52	6,947 94	.....	5,463 05	8,335 14	.....	1,797 31	.....	.....	.....	.....
David's Island, New York Harbor	55 00	3,624 50	.....	4,156 91	4,943 56	56 00	1,071 93	.....	.....	.....	.....
Willets Point, New York Harbor	241 00	700 00	.....	754 00	38 00	.....	330 75	.....	.....	.....	.....
West Point, New York	29,959 82	9,000 00	4,200 00	2,739 53	1,172 35	.....	338 94	.....	.....	.....	.....
Springfield Armory	2,417 75	303 75	.....	.....	.....	.....	.....	.....	.....	.....	.....
Disbursing Agency, Louisville, Ky	.....	2,520 00	.....	.....	23,623 30	.....	.....	.....	.....	.....	.....
Military Prison, Fort Leavenworth	.....	.....	.....	.....	15,447 71	161,687 11	468 00	.....	.....	.....	.....
Allegheny Arsenal	980 40	30 00	.....	.....	295 35	.....	.....	.....	.....	.....	.....
Augusta Arsenal	1,564 47	357 77	.....	.....	204 57	.....	.....	.....	.....	.....	.....
Frankford Arsenal	97 50	937 75	.....	191 20	212 25	.....	.....	.....	.....	.....	.....
Indianapolis Arsenal	1,973 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kennebec Arsenal	874 37	40 00	.....	.....	15 00	10 00	.....	.....	.....	.....	.....
Rock Island Arsenal	2,762 50	230 00	.....	.....	1,755 00	.....	.....	.....	.....	.....	.....
Watertown Arsenal	2,164 72	137 75	.....	.....	15 00	.....	.....	.....	.....	.....	.....
Watervliet Arsenal	2,007 59	38 00	.....	.....	700 00	.....	.....	.....	.....	.....	.....
Grand total	3,542,850 15	831,799 79	233,875 50	831,289 31	3,899,765 26	1,435,281 48	80,082 28	97,813 60	60,010 51	10,000 00	12,000 00

Amounts estimated for by disbursing officers of the Quartermaster's Department, &c.—Continued.

Military divisions, departments, &c.	Road from Fort Scott to the national cemetery, Kansas.	Road from Chattanooga to the national cemetery, Tennessee.	Building for military quarters at Fort Leavenworth, Kansas.	Military road from Yankton to Fort Randall, Dakota.	Buildings for military quarters at Fort Apache, Arizona.	Purchase of the Arlington estate.	Constructing approaches to Fort Bliss, Texas.	Military post at Fort McKinney, Wyoming.	Military post near Musselshell River, Montana (Fort Maginnis).	Total amount estimated for.
Department of the East										$445,979 91
Department of the South										213,027 98
Total Military Division of the Atlantic										659,007 89
Headquarters Military Division of the Missouri										655,582 55
Department of the Missouri			$106,956 77				$5,000 00			1,955,743 84
Department of Dakota				$5,000 00					$25,000 00	1,623,811 29
Department of the Platte								$25,000 00		1,050,950 73
Department of Texas										676,256 04
Total Military Division of the Missouri			106,956 77	5,000 00			5,000 00	25,000 00	25,000 00	5,962,344 45
Military Division of the Pacific					$13,928 44					1,967,341 01
Depot at San Francisco										204,671 83
Depot at Washington	$3,000 00	$5,000 00				$125,000 00				533,376 84
Depot at Philadelphia										1,119,948 23
Depot at New York										281,484 37
Depot at Jeffersonville										254,599 04
Columbus Barracks										51,977 37
Jefferson Barracks										26,407 96
David's Island, New York Harbor										13,907 90
Willets Point, New York Harbor										2,063 75
West Point, New York										47,410 64
Springfield Armory										2,721 50
Disbursing Agency, Louisville, Ky										26,143 30
Military Prison, Fort Leavenworth										177,602 82
Allegheny Arsenal										1,305 75
Augusta Arsenal										2,126 81
Frankford Arsenal										1,438 70
Indianapolis Arsenal										1,973 00
Kennebec Arsenal										939 37
Rock Island Arsenal										4,747 50
Watertown Arsenal										2,317 47
Watervliet Arsenal										2,745 59
Grand total	3,000 00	5,000 00	106,956 77	5,000 00	13,928 44	125,000 00	5,000 00	25,000 00	25,000 00	11,348,603 09

Amounts remitted to disbursing officers of the Quartermaster's Department from appropriations for fiscal year 1882–'83.

Military divisions, departments, &c.	Regular supplies.	Incidental expenses.	Cavalry and artillery horses.	Barracks and quarters.	Transportation of the Army and its supplies.	Clothing, camp and garrison equipage.	Construction and repair of hospitals.	National cemeteries.	Pay of superintendents of national cemeteries.	Road from Mound City to the national military cemetery, Illinois.	Road from New Albany to the national cemetery, Indiana.
Department of the East	$151,283 52	$62,196 13	$7,025 00	$68,141 95	$115,180 74	$334 60	$11,348 44	$11,255 25	$18,492 98	.....	.....
Department of the South	41,182 44	22,850 67	1,530 00	31,559 60	53,073 59	189 00	5,896 91	30,141 91	26,561 86	.....	.....
Total Military Div'n of the Atlantic	192,465 96	85,046 80	8,555 00	99,701 55	168,254 33	523 60	17,245 35	41,397 16	45,054 84	.....	.....
Headquarters Military Div. of the Missouri	93,357 78	52,722 97	.....	37,776 21	467,433 69	3,117 45	.....	1,023 28	.....	.....	.....
Department of the Missouri	639,677 28	109,899 24	37,532 00	126,020 00	905,641 97	681 66	10,973 14	6,324 28	6,753 67	.....	.....
Department of the Dakota	769,723 82	100,046 81	41,600 00	73,793 15	590,160 97	1,241 00	16,870 54	.....	.....	.....	.....
Department of the Platte	403,234 26	93,563 63	23,750 00	55,091 39	432,246 26	630 00	6,736 07	405 00	1,500 00	.....	.....
Department of Texas	385,366 85	56,373 84	34,177 00	42,850 35	154,566 96	38 80	594 43	685 81	1,572 00	.....	.....
Total Military Div'n of the Missouri	2,291,359 99	412,606 49	137,059 00	335,531 10	2,550,049 85	5,708 91	35,174 18	8,438 37	9,825 67	.....	.....
Military Division of the Pacific	764,281 82	142,952 76	79,036 50	197,730 44	720,341 54	5,100 00	23,258 82	.....	.....	.....	.....
Depot at San Francisco	1,320 00	10,000 00	.....	9,999 96	890 00	182,461 87	.....	.....	.....	.....	.....
Depot at Washington	106,178 57	70,297 95	.....	119,601 40	43,374 82	63 25	24 00	45,091 85	4,245 00	$10,000 00	.....
Depot at Philadelphia	11,000 42	21,650 62	.....	5,867 02	69,241 36	1,005,115 87	.....	1,650 44	.....	.....	.....
Depot at New York	37,855 24	30,214 75	.....	28,994 88	184,169 50	125 00	.....	125 00	.....	.....	.....
Depot at Jeffersonville	59,195 53	30,133 02	.....	12,623 76	66,188 88	73,532 37	.....	275 48	650 00	.....	$12,000 00
Columbus Barracks	9,808 80	3,313 05	.....	7,691 52	30,899 00	.....	265 00	.....	.....	.....	.....
Jefferson Barracks	3,864 52	6,947 94	.....	5,463 05	8,335 14	.....	1,797 31	.....	.....	.....	.....
David's Island, New York Harbor	55 00	3,624 50	.....	4,156 91	4,943 56	56 00	1,071 93	.....	.....	.....	.....
Willets Point, New York Harbor	241 00	700 00	.....	754 00	38 00	.....	330 75	.....	.....	.....	.....
West Point, New York	29,959 82	9,000 00	4,200 00	2,739 53	1,172 35	.....	338 94	.....	.....	.....	.....
Springfield Armory	2,417 75	303 75	.....	.....	.....	.....	.....	.....	.....	.....	.....
Disbursing Agency, Louisville, Ky	.....	2,520 00	.....	.....	23,623 30	.....	.....	.....	.....	.....	.....
Military Prison, Fort Leavenworth	.....	.....	.....	.....	15,447 71	161,677 11	468 00	.....	.....	.....	.....
Allegheny Arsenal	980 40	30 00	.....	.....	295 35	.....	.....	.....	.....	.....	.....
Augusta Arsenal	1,564 47	357 77	.....	.....	204 57	.....	.....	.....	.....	.....	.....
Frankford Arsenal	97 50	937 75	.....	191 20	212 25	.....	.....	.....	.....	.....	.....
Indianapolis Arsenal	1,973 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kennebec Arsenal	874 37	40 00	.....	.....	15 00	10 00	.....	.....	.....	.....	.....
Rock Island Arsenal	2,762 50	230 00	.....	.....	1,755 00	.....	.....	.....	.....	.....	.....
Watertown Arsenal	2,164 72	137 75	.....	.....	15 00	.....	.....	.....	.....	.....	.....
Watervliet Arsenal	2,007 59	38 00	.....	.....	700 00	.....	.....	.....	.....	.....	.....
Grand total	3,522,428 97	831,082 90	228,850 50	831,046 32	3,890,166 51	1,434,383 98	79,974 28	96,978 30	59,775 51	10,000 00	12,000 00

Military divisions, departments, &c.	Road from Fort Scott to the national cemetery, Kansas.	Road from Chattanooga to the national cemetery, Tennessee.	Building for military quarters at Fort Leavenworth, Kansas.	Military road from Yankton to Fort Randall, Dakota.	Buildings for military quarters at Fort Apache, Arizona.	Purchase of the Arlington estate.	Constructing approaches to Fort Bliss, Texas.	Military post at Fort McKinney, Wyoming.	Military post near Musselshell River, Montana (Fort Maginnis)	Total amount remitted.
Department of the East										$445,258 61
Department of the South										212,985 98
Total Military Division of the Atlantic										658,244 59
Headquarters Military Division of the Missouri										655,431 38
Department of the Missouri			$106,956 77				$5,000 00			1,955,460 01
Department of the Dakota				$5,000 00					$25,000 00	1,623,436 29
Department of the Platte								$25,000 00		1,042,156 61
Department of Texas										676,226 04
Total Military Division of the Missouri			$106,956 77	5,000 00			5,000 00	25,000 00	25,000 00	5,952,710 33
Military Division of the Pacific					$13,928 44					1,946,630 32
Depot at San Francisco										204,671 83
Depot at Washington	$3,000 00	$5,000 00				$125,000 00				531,876 84
Depot at Philadelphia										1,114,525 73
Depot at New York										281,484 37
Depot at Jeffersonville										254,599 04
Columbus Barracks										51,977 37
Jefferson Barracks										26,407 96
David's Island, New York Harbor										13,907 90
Willets Point, New York Harbor										2,063 75
West Point, New York										47,410 64
Springfield Armory										2,721 50
Disbursing Agency, Louisville, Ky										26,143 30
Military Prison, Fort Leavenworth										177,602 82
Allegheny Arsenal										1,305 75
Augusta Arsenal										2,126 81
Frankford Arsenal										1,438 70
Indianapolis Arsenal										1,973 00
Kennebec Arsenal										939 37
Rock Island Arsenal										4,747 50
Watertown Arsenal										2,317 47
Watervliet Arsenal										2,745 59
Grand total	3,000 00	5,000 00	106,956 77	5,000 00	13,928 44	125,000 00	5,000 00	25,000 00	25,000 00	11,310,572 48

REPORT OF EXAMINATION OF ACCOUNTS.

The accounts and vouchers which have been examined in this office since the last annual report show approved disbursements as follows:

Appropriations.	For what fiscal year.														
	1871 and prior years.	1872-'73.	1873-'74.	1874-'75.	1875-'76.	1876-'77.	1877-'78.	1878-'79.	1879 and prior years.	1879-'80.	1880 and prior years.	1880-'81.	1881-'82.	1882-'83.	Total.
Regular supplies	$52 75		$72 18			$297 29	$1,421 36		$3,241 66	$92 82	$2,203 08	$91,640 80	$2,421,231 59	$559,793 81	$3,080,047 34
Incidental expenses	2,111 62		145 15			5 60	3 20	$8 65	3,043 33	36 40	1,699 72	14,712 91	623,884 80	156,014 45	801,665 83
Cavalry and artillery horses									4,299 00		11,540 00	430 50	119,615 83	1,914 00	137,799 33
Barracks and quarters	18 65		48 60						6,943 99	5 20	1,994 20	10,060 02	567,053 44	147,197 03	733,321 13
Army transportation	10,851 23	$160 04	465 26	$1,043 42	$40 62	27 35	202 86		144,984 71	25,068 83	147,799 86	558,776 26	2,690,495 71	516,329 15	4,096,245 30
Army clothing	38								192 12		67	2,035 24	432,417 07	817,099 44	1,251,744 92
National cemeteries		112 00						8,586 63	170 45			111 05	46,937 12	20,978 77	76,896 02
Pay of superintendents of national cemeteries													27,313 83	5,897 00	33,210 83
Hospitals						7 00						6,690 77	60,446 25	9,317 64	76,461 66
Military post at El Paso, Tex										72 20					72 20
Quarters at Fort Omaha, Nebr												3,695 85	1,573 32		5,269 17
Military headquarters at Fort Snelling, Minn												7,679 87	48,443 94	826 67	56,950 48
Headquarters buildings at San Antonio, Tex												50,000 00			50,000 00
Military post near Pagosa Springs, Colo													2,827 79		2,827 79
Ringgold Barracks, Tex													29 19		29 19
Military post near Niobrara River													437 93		437 93
Military headquarters at Fort Leavenworth, Kans													19,834 30	2,562 02	22,396 32
Military post near northern boundary of Montana													2,337 00		2,337 00
Headstones for graves of soldiers in private cemeteries													21,553 56		21,553 56
Macadamized road from Vicksburg to national cemetery, Mississippi													7,485 36		7,485 36
Mullan wagon-road													1,007 38		1,007 38

River ... Post near Musselshell																		
Road from Fort Scott to national cemetery, Kansas															3,997 71		3,997 71	
Road from Chattanooga to national cemetery, Tennessee															6,703 30		6,703 30	
Road from Mound City to national cemetery, Illinois															9,807 67		9,807 67	
Military post at Fort McKinney, Wyo																2,235 56	2,235 56	
Military posts for the protection of the Rio Grande frontier																1,035 57	1,035 57	
																1,600 00	1,600 00	
Total	13,034 63	272 04	731 19	1,043 42	40 62	337 24	1,627 42	8,595 28	162,875 26	25,275 45	165,237 53	745,833 27	7,115,434 09	2,242,801 11	10,483,138 55			

The following tables exhibit the number of money accounts and property returns on hand at the commencement of the fiscal year, the number received and number examined during the year, and the number remaining on hand unexamined at the close of the year:

Money accounts.

	Calendar year.			Total.
	1881.	1882.	1883.	
On hand July 1, 1882	190	1,104	.....	1,294
Received during the year	7	1,982	1,108	3,097
Total	197	3,086	1,108	4,391
Examined during the year	197	2,744	409	3,350
Remaining on hand July 1, 1883	.....	342	699	1,041

Property returns.

	Calendar year.			Total.
	1881.	1882.	1883.	
On hand by July 1, 1882	257	798	.....	1,055
Received during the year	39	2,424	873	3,336
Total	296	3,222	873	4,391
Examined during the year	296	3,222	215	3,733
Remaining on hand July 1, 1883	.....	.....	658	658

Statement showing the amounts expended by officers in the Quartermaster's Department during, and on account of the appropriations for, the fiscal year ended June 30, 1883, and balances in their hands, so far as shown by accounts received at this office.

Names of officers.	Expenditures.	Balances.
Atwood, Capt. E. B., assistant quartermaster	$127,821 91	$13,172 32
Avery, Lieut. F P., Third Infantry	12,530 32	.....
Adams, Lieut. T. R., Fifth Artillery	535 20	.....
Alligood, Capt. C. A., military storekeeper, Quartermaster's Department	4,005 45	503 48
Ames, Lieut. R. F., Eighth Infantry	1,113 64	.....
Andrus, Lieut. E. P., Fifth Cavalry	6,958 89	305 02
Ames, Lieut. L. S., Second Infantry	24,584 50	1,750 50
Bingham, Lieut. Col. J. D., deputy quartermaster-general	24,124 10	90,436 86
Batchelder, Lieut. Col. R. N., deputy quartermaster-general	512,300 01	19,182 28
Baker, Maj. E. D., quartermaster	55,793 63	.....
Belcher, Capt. J. H., assistant quartermaster	13,881 10	69 55
Barnett, Capt. C. R., assistant quartermaster	4,160 96	8,567 90
Blunt, Capt. A. P., assistant quartnrmaster	176,723 97	.....
Bird, Capt. Charles, assistant quartermaster	83,288 61	1,541 50
Booth, Capt. C. A. assistant quartermaster	12,166 66	5,608 28
Blauvelt, Lieut. W. F., Fifteenth Infantry	1,306 28	.....
Brush, Lieut. D. H., Seventeenth Infantry	9,238 26	98 55
Brennan, Lieut James, Seventeenth Infantry	7,793 00	.....
Byrne, Lieut. B. A., Sixth Infantry	1,777 62	.....
Blunt, Lieut. A. C., Fifth Artillery	50 55	.....
Barrett, Lieut. G., Tenth Infantry	8,022 93	.....
Barry, Lieut. T. H., First Infantry	10,453 98	184 67
Brant, Lieut. L. P., First Infantry	150 00	.....
Boughton, Lieut. D. H., Third Cavalry	1,416 65	.....
Blake, Lieut. J. Y. F., Sixth Cavalry	2,060 00	.....
Bliss, Lieut. T. H. First Artillery	41 85	.....
Baker, Lieut. F., Ordnance Department	254 00	.....
Brereton, Lieut. J. J., Twenty-fourth Infantry	7,653 00	241 99
Budlong, Lieut. A. H., Ninth Cavalry	3,651 91	.....
Burnham, Lieut. D. R. Fifteenth Infantry	608 17	.....

nounts expended by officers in the Quartermaster's Department, &c.—Continued.

Names of officers.	Expenditures.	Balances.
e, Lieut. J. G., Twenty-second Infantry	$5,838 75	
apt. O. B., Eighth Cavalry	2 00	
. Col. A. G., Third Cavalry	124 05	
pt. J. M., Seventh Cavalry		$8,000 00
Lieut. R. P., Fourth Infantry	3,267 32	
Lieut. H. L., Twenty-first Infantry	779 04	45 97
, Capt. F. D., Fifth Infantry	485 00	
Capt. William, Sixth Infantry	972 10	41 65
ll, Capt. L. E., assistant quartermaster	158,802 62	5,817 64
apt. G. H., assistant quartermaster	16,139 83	56 29
Lieut. C. St. J., Seventeenth Infantry	313 53	
d, Lieut. W. H., Fifth Infantry	1,620 73	
apt. J. L., assistant quartermaster	295 00	
Lieut. W. H., Sixth Cavalry	5,060 22	84 60
gs, Lieut. J. F., Third Cavalry	3,080 75	197 66
Lieut. G. F., Fifteenth Infantry	706 25	
ieut. S. E., Second Infantry	13,364 45	1,832 46
Capt. H., Second Infantry	3,327 55	
rlin, Lieut J. L., First Artillery	356 59	
Lieut. G. P., First Artillery	85 10	
Lieut C. D., Twenty-third Infantry	11,356 92	37 18
Lieut W. L., Twenty-third Infantry	60 00	
ieut. D. H., Fifteenth Infantry	14,035 30	1,132 68
, Lieut. J., Sixth Infantry	6,783 53	
y, Lieut. S. R., Tenth Cavalry	4,068 15	10 80
ieut. J. M., Third Artillery	2,202 41	
. Lieut. G. A., Fifteenth Infantry	3,699 03	707 24
eth, Lieut. E., Seventeenth Infantry	1,970 48	28 92
ll, Lieut. W. J., Twenty-second Infantry	13,107 07	356 15
Lieut. J. C., Thirteenth Infantry	1,352 99	
ieut. W. O., Fifteenth Infantry	7,463 84	125 60
Lieut. G. F., Third Cavalry	409 00	
Lieut. T. H., Ninth Infantry	2,215 63	209 17
ton, Lieut. F. de L., First Infantry	8,233 98	
rlin, Lieut. L. A., First Artillery	27,766 03	25 50
ieut. Col. J. J., deputy quartermaster-general	49,149 01	4,688 31
Maj. G. B., quartermaster	212,385 75	16,738 89
ieut. J. C., Twentieth Infantry	1,719 29	
Lieut. J., Tenth Infantry	1,215 24	
ieut G. A., Third Cavalry	4,130 57	
Lieut. B., Third Cavalry	25,226 06	10 00
, Lieut J. A., Twenty-third Infantry	23 25	
Lieut. G. B., Fifth Cavalry	12,312 09	
eut. R. H., Sixth Infantry	10,440 01	7,559 15
rty, Capt. W. W., Twenty-second Infantry	3,948 74	
, Lieut. E. S., Second Artillery	562 34	
Lieut. E., Third Artillery	15,744 29	2,565 03
ort, Lieut. T. C., Ninth Cavalry	8,939 92	
Lieut. H. C., Third Artillery	988 05	
ol. J. A., Assistant Quartermaster-General	276,140 53	9,358 87
n, Maj. T. J., quartermaster	42,258 96	1,464 66
s, Lieut. F. A., First Cavalry	10,262 55	3,598 70
n, Lieut. F. F., Fourteenth Infantry	146 17	
, Lieut. C. D., Eighth Infantry	8,803 06	
ieut. E. A., Eighth Cavalry	1,849 26	318 64
ieut. R. T., Second Infantry	5,961 28	1,059 55
Lieut. C. P., Thirteenth Infantry	3,224 23	
, Lieut. F. H. E., Twenty-first Infantry	261 97	
Maj. C. W., quartermaster	26,047 72	1,120 75
Capt. J. V., assistant quartermaster	375,097 70	16,970 52
, Capt. L. C., assistant quartermaster	36,470 39	75 81
Capt. G. F., Eighth Cavalry	4,275 66	
Maj. J. P., Ordnance Department	845 26	
Lieut. T. F., Fifth Infantry	34,823 37	276 55
Lieut. F., Fourth Artillery	3,012 27	
Lieut. F. W., Fifth Cavalry	3,283 30	
Maj. James, quartermaster	34,210 14	2,150 33
. Maj. E. B., quartermaster	852,979 62	88,422 25
h, Capt. M. J., Ordnance Department	2,092 88	
Lieut. E., Engineer Corps	1,798 53	
Lieut. J. H., Fourteenth Infantry	11,613 80	177 19
n, Lieut. M. F. Ninth Cavalry	5,884 94	
pt. W. H., military storekeeper	158,791 98	
Lieut. E. T., Twenty-fifth Infantry	870 35	
eut. J. B., Thirteenth Infantry	4,231 97	
Lieut. W. L., Twelfth Infantry	1,144 09	35 51
ieut. J. N., Sixth Cavalry	508 33	
od, Lieut. C. B., Sixth Cavalry	5,154 92	63 35
Lieut. R. N., Twenty-second Infantry	757 74	60 50
r, Lieut. J. H., Ninth Cavalry		89 71
, Lieut. Thomas, First Cavalry	6,300 59	

Amounts expended by officers in the Quartermaster's Department, &c.—Continued.

Names of officers.	Expenditures.	Balances.
Green, Lieut. J. O., Twenty-fifth Infantry	$2,010 74	$49 52
Gerlach, Lieut. W., Third Infantry	4,439 93	902 22
Godwin, Lieut. E. A., Eighth Cavalry	3,171 50	.....
Godfrey, Capt. E. S., Seventh Cavalry	1,799 00	.....
Galbraith, Lieut. J. G., First Cavalry	4,864 11	299 37
Gardener, Lieut. C., Nineteenth Infantry	4,258 49	.....
Holabird, Col. S. B., Assistant Quartermaster-General	885,299 95	.....
Hodges, Lieut. Col., H. C., deputy quartermaster-general	258,918 68	47,345 48
Hughes, Major W. B., quartermaster	48,818 01	3,966 24
Hunt, Capt. T. B., assistant quartermaster	6,422 74	71 30
Hoyt, Capt. C. H., assistant quartermaster	42,337 47	552 36
Humphrey, Capt. C. F., assistant quartermaster	121,422 39	1,898 11
Hubbard, Capt. E. B., assistant quartermaster	17,935 49	.....
Hathaway, Capt., F. H., assistant quartermaster	180,157 52	10,909 85
Harmon, Lieut. M. F., First Artillery	6,135 31	.....
Hasson, Lieut. P., Fourteenth Infantry	12,706 94	67 83
Hamner, Lieut. W. H., Twentieth Infantry	6,886 21	135 96
Huston, Lieut. J. F., Twentieth Infantry	22,094 15	.....
Hoyt, Lieut. G. S., Eighteenth Infantry	36,257 74	1,805 17
Hare, Lieut. L. R., Seventh Cavalry	21,399 02	491 78
Heistand, Lieut. H. O. S., Eleventh Infantry	6,934 69	319 53
Hoffman, Lieut. W., Eleventh Infantry	772 45	.....
Hodges, Lieut. C. L., Twenty-fifth Infantry	11,948 73	356 59
Hoyt, Lieut. R. W., Eleventh Infantry	5,874 80	2,021 56
Hardin, Lieut. E. E., Seventh Infantry	14,710 29	1,795 44
Homer, Lieut. W. B., Fifth Artillery	5,763 22	5 00
Hyde, Lieut. J. McE., Eighth Infantry	853 26	.....
Hodgson, Lieut. F. G., Sixth Cavalry	5,251 49	.....
Hay, Lieut. C., Twenty-third Infantry	11,607 57	.....
Hall, Lieut. W. P., Fifth Cavalry	6,214 53	155 46
Hobbs, Lieut. C. W., Third Artillery	7,450 25	.....
Hull, Capt. G. A., military storekeeper	57,138 37	914 48
Howe, Lieut. W., Fourth Artillery	1,347 88	22 16
Hinton, Lieut. C. B., Eighteenth Infantry	20,164 05	.....
Honeycutt, Lieut. J. T., First Artillery	468 15	.....
Hutton, Lieut. J. A., Eighth Infantry	1,190 26	.....
Harlow, Lieut. F. S., First Artillery	9 00	.....
Hunter, Lieut. G. K., Third Cavalry	474 66	64 43
Humphreys, Lieut. Charles, Third Artillery	3,117 34	.....
Ingalls, Lieut. C. H., Sixth Infantry	770 73	.....
Jacobs, Capt. J. W., assistant quartermaster	23,756 20	417 39
Jones, Lieut. F. B., Third Infantry	8,484 50	237 06
Jones, Lieut. S. R., Fourth Artillery	169 58	.....
Johnson, Lieut. A. B., Seventh Infantry	2,697 45	.....
Johnson, Lieut. C. P., Fourth Infantry	2,683 37	488 52
Kimball, Capt. A. S., assistant quartermaster	253,514 01	48,558 21
Kirk, Capt. E. B., assistant quartermaster	10,958 46	.....
Kane, Lieut. J. J., Twenty-fourth Infantry	2,507 03	.....
Kendrick, Lieut. F. M. H., Seventh Infantry	1,298 76	.....
Kelton, Lieut. D. H., Tenth Infantry	2,816 68	273 23
Kendall, Capt. H. M., Sixth Cavalry	17,591 30	9,555 38
Knox, Lieut. T. T., First Cavalry	660 43	.....
Kobbe, Lieut. W. A., jr., Third Artillery	2,417 40	.....
Knower, Lieut. F. C., Third Artillery	5,359 12	.....
Kennon, Lieut. L. W. V., Sixth Infantry	9,244 39	.....
Kernan, Lieut. F. J., Twenty-first Infantry	400 00	.....
Ludington, Lieut. Col. M. I., deputy quartermaster-general	119,636 23	.....
Lee, Maj. J. G. C., quartermaster	345,428 16	39,375 12
Lord, Capt. J. H., assistant quartermaster	188,840 90	20,103 01
Landis, Lieut. J. F. R., First Cavalry	1,890 59	.....
Leggett, Lieut. H. F., Twenty-fourth Infantry	8,560 48	.....
Lord, Lieut. T. W., Twentieth Infantry	20,408 89	4,596 83
Myers, Lieut. Col. William, deputy quartermaster-general	6,700 24	.....
Moore, Maj. J. M., quartermaster	1,703 32	15,309 70
McGonigle, Maj. A. J., quartermaster	536,435 64	12,643 69
Miltmore, Capt. A. E., assistant quartermaster	15,399 38	4,921 42
McCauley, Capt. C. A. H., assistant quartermaster	10,908 71	226 85
Marshall, Capt. J. M., assistant quartermaster	370,154 81	14,848 75
Morgan, Capt. A. S. M., Ordnance Department	1,219 77	103 65
Miller, Lieut. W. H., First Cavalry	16,076 36	1,823 80
Michaelis, Capt. O. E., Ordnance Department	4,224 37	256 82
Mitchum, Lieut O. B., Ordnance Department	4,353 31	.....
Morrison, Lieut. C. C., Ordnance Department	2,721 50	.....
Martin, Capt. W. P., military storekeeper	21,055 98	209 04
Morrison, Lieut. J. F., Twentieth Infantry	57 80	.....
Mills, Lieut. F. H., Twenty-fourth Infantry	23,102 49	187 25
Manley, Lieut. J. A., Twentieth Infantry	1,532 90	.....
Miller, Lieut. S. W., Fifth Infantry	288 06	.....
Mansfield, Lieut. F. W., Eleventh Infantry	7,540 45	.....
Mitchell, Lieut. W., Third Infantry	10,207 20	.....
Miller, Lieut. C. P., Fourth Artillery	3,195 99	32

!mounts expended by officers in the Quartermaster's Department, &c.—Continued.

Names of officers.	Expenditures.	Balances.
Lieut. S. M., Fifth Artillery	$13,116 66	
thy, Lieut. D. E., Twelfth Infantry	1,269 23	
, Lieut. J. S., jr., First Infantry	808 95	
Lieut. W., Eighth Infantry	4,995 26	$28 39
ord, Lieut. T. S., Thirteenth Infantry	15,741 61	496 20
eb, Lieut. T. S., Ninth Infantry	3,582 58	
, Lieut. M. M., Tenth Cavalry	14,484 07	
Lieut. A. L., Eleventh Infantry	2,165 45	5 20
Lieut. C. C., Ninth Infantry	1,949 91	
, Lieut. J. A., Fifteenth Infantry	1,486 90	67 50
n, Lieut. G. H., Third Cavalry	1,699 70	103 05
son, Lieut. J. D., Seventeenth Infantry	987 43	
n, Lieut. J., Sixteenth Infantry	1,227 37	
Col. T. H., Eighth Cavalry	73 89	
n, Lieut. J. J., Fourth Infantry	24,535 63	
l, Lieut. H. B., Third Artillery	6,094 90	1,343 59
d, Capt. G. T., United States Army	1,751 47	10 85
d, Lieut. J. A., Ninth Cavalry	4,935 77	
son, Lieut. R. H., First Artillery	95 25	
Lieut. H. H., Twenty-first Infantry	900 00	
, Lieut. F. J., Twenty-first Infantry	6,315 07	
, Capt. J., Ordnance Department	2,239 37	
son, Lieut. G. T. T., Fourteenth Infantry	14,011 60	262 16
n, Lieut. D. C., Second Cavalry	43,060 84	613 81
s, Lieut. H. P., Sixth Cavalry	2,633 74	
n, Lieut. N. P., First Infantry	1,477 65	93 92
Lieut. J. M., Third Cavalry	5,923 84	1,534 33
, Lieut. J. W., Eighth Infantry	2,567 78	
r, Lieut. W. L., Eighth Infantry	3,344 84	36 09
e, Lieut. J. H. H., Thirteenth Infantry	11,416 53	21 58
Lieut. A. M., Fourth Cavalry	26,985 81	1,133 69
r, Lieut. C. G., Sixth Infantry	10,602 34	26 81
Lieut. F. E., Eighth Cavalry	5,638 65	
Lieut. R. D., Third Artillery	3,829 72	2,256 94
, Major F. H., Ordnance Department	90 08	
n, Lieut. W., Seventh Infantry	3,026 24	
lds, Maj. C. A., quartermaster	22,506 96	3,484 77
on, Maj. A. G., quartermaster	101,711 41	693 87
n, Capt. J. F., military storekeeper	166 67	
Lieut. J. M., Twenty-first Infantry	10,146 68	67
d, Capt. W. H., Ordnance Department	1,220 34	
lds, Lieut. A., Twentieth Infantry	15,788 38	
on, Lieut. D., Seventh Infantry	906 96	
Lieut. H. A., Second Artillery	3,323 92	
Lieut. W. F., Twenty-third Infantry	10 20	
, Lieut. A. S., Fifteenth Infantry	52 90	
Lieut. J., Ninth Infantry	5,336 98	
ds, Lieut. W. V., Sixteenth Infantry	6,094 48	
Lieut. H. J., Fifth Artillery	17,822 93	4,230 05
ell, Lieut. J., jr., Ordnance Department	233 30	
lds, Lieut. B., Third Cavalry	403 29	
Lieut. H. L., Twenty-fourth Infantry	8,131 61	
l, Lieut. A. H., Ordnance Department	96 00	
l, Lieut. A. J., Seventh Cavalry	543 17	5 00
eut. F. W., Third Infantry	2,358 86	788 87
, Lieut. H. P., Twenty-fifth Infantry	17 00	183 00
lph, Lieut. B. H., Third Artillery	230 50	2,880 50
n, Lieut. S., jr., First Artillery	6,845 00	655 00
, Col. R., Assistant Quartermaster-General	18,580 96	31,137 21
le, Lieut. Col. C. G., deputy quartermaster-general	82,339 61	28,526 97
Maj. J. W., quartermaster	9,331 43	655 49
Capt. G. C., assistant quartermaster	14,241 74	
, Capt. E. J., assistant quartermaster	42,961 73	1,837 39
n, Capt. J., assistant quartermaster	84,645 00	19,019 72
an, Lieut. C. A., Ninth Cavalry	4,081 26	70 00
Lieut. F. D., Twentieth Infantry	1,094 54	
Lieut. R. G., First Artillery	62 40	
Lieut. H. G., jr., Seventh Cavalry	676 83	
Lieut. S., Second Artillery	19,291 58	170 09
Lieut. D. F., Tenth Infantry	2,098 94	55
er, Lieut. L. H., First Infantry	2,569 76	
Lieut. G. L., Sixth Cavalry	4,843 99	20 20
Lieut. C. G., First Infantry	4,917 24	
d, Lieut. J., Eighth Infantry	333 00	25
erhayes, Lieut. J. W., Eighth Infantry	1,529 46	
aker, Capt. F. L., Fourth Cavalry	1,137 00	
ler, Lieut. W. S., Fifth Cavalry	679 53	
on, Lieut. J. F., Third Cavalry	15,464 45	985 08
Lieut. J., Fourth Infantry	3,622 98	
s, Lieut. R. R., Sixth Infantry	2,169 90	
fer, Lieut. C. M., Ninth Cavalry	30,000 00	

Amounts expended by officers in the Quartermaster's Department, &c.—Continued.

Names of officers.	Expenditures.	Balances.
Stewart, Lieut. W. F., Fourth Artillery	$689 66	
Sage, Lieut. W. H., Fifth Infantry	514 74	
Strother, D. H., United States consul-general, City of Mexico		$1,300 00
Smith, Lieut. C., jr., Eighth Infantry	280 58	
Shelby, Lieut. I. O., Sixteenth Infantry	3,293 54	
Sladen, Lieut. J. A., Fourteenth Infantry	11,749 87	449 25
Steever, Lieut. E. Z., Third Cavalry	748 16	
Sparrow, Lieut. S. E., Twenty-first Infantry	71 13	
Sands, Lieut. G. H., Sixth Cavalry	1,709 71	8 25
Tompkins, Col. C. H., Assistant Quartermaster-General	242,090 93	117,149 40
Totten, Lieut. C. A. L., Fourth Artillery	421 36	
Thorp, Lieut. F., Fifth Artillery	9,503 91	21 31
Thompson, Lieut. R. E., Sixth Infantry	7,105 87	
Truitt, Lieut. C. M., Twenty-first Infantry	1,894 39	
Tyler, Lieut. W. W., Thirteenth Infantry	8,313 04	
Thomas, Lieut. E. D., Fifth Cavalry	38,980 29	
Terrett, Lieut. C. P., Eighth Infantry	2,246 06	
Thies, Lieut. F., Third Infantry	8,779 44	
Thompson, Lieut. J. T., Second Artillery	9,862 59	
Thurston, Lieut. W. A., Sixteenth Infantry	833 04	
Taylor, Lieut. A. H. M., Nineteenth Infantry	4,008 93	48 22
Tate, Lieut. D. L., First Cavalry	8 00	
Ulio, Lieut. J., Twenty-first Infantry	4,099 41	
Van Orsdale, Lieut. J. T., Seventh Infantry	824 57	
Vedder, Lieut. S. C., Nineteenth Infantry	7,726 46	317 76
Weeks, Maj. G. H., quartermaster	447,212 01	12,769 81
Williams, Capt. C. W., assistant quartermaster	20,872 20	1,145 08
Wheeler, Capt. D. D., assistant quartermaster	804,666 10	35,211 71
Whistler, Lieut. G. N., Fifth Artillery	2,820 04	81 73
Wilson, Lieut. J. L., Fourth Artillery	5,705 79	763 96
Wood, Lieut. P. G., Twelfth Infantry	1,595 20	
Waltz, Lieut. M. F., Twelfth Infantry	787 00	
Wotherspoon, Lieut. W. W., Twelfth Infantry	5,970 85	333 84
Ward, Lieut. F. K., First Cavalry	1,453 15	
Wilson, Lieut. R. H., Eighth Infantry	3,048 51	38 98
White, Lieut. J. V., First Artillery	1,137 97	
Wolf, Lieut. S. A., Fourth Infantry	6,582 55	
Woodward, Lieut. S. L., Tenth Cavalry	6,074 25	
Wills, Lieut. J. H., Twenty-second Infantry	1,660 15	
Webster, Lieut. I. T., First Artillery	641 96	
Webster, Lieut. J. McA., Twenty-second Infantry	1,786 74	
Wainwright, Lieut. R. P. P., First Cavalry	445 08	713 79
Wittich, Lieut. W., Twenty-first Infantry	3,099 26	
Waterman, Lieut. J. C., Seventh Cavalry	1,278 57	
Williams, Lieut. R. A., Eighth Cavalry	1,997 90	
Wetherill, Lieut. A. M., Sixth Infantry	1,072 36	
Wheeler, Lieut. F., Fourth Cavalry	3,943 33	87 47
Williams, Lieut. W. M., Nineteenth Infantry	869 52	244 05
Young, Capt. D. J., Ordnance Department	2,977 44	
Yeatman, Lieut. R. T., Fourteenth Infantry	1,609 03	176 48
Total	10,106,751 32	839,763 04

If to the foregoing statement of expenditures	$10,106,751 32	
and balances	839,763 04	
there be added the amount of remittances for which accounts have not yet been received at this office	545,460 28	
and the balances of appropriations in the Treasury undrawn June 30, 1883	707,611 53	
the aggregate		$12,199,586 17
will equal the sum of the appropriations	11,949,825 21	
and the amount of credit deposits	249,760 96	
		12,199,586 17

The funds represented by the balances in hands of officers, remittances not yet accounted for, and the balances in the Treasury, as reported above, will be required to settle expenditures incurred during the year, the accounts for which have not yet been received and audited.

The following table exhibits the number of wagons, spring wagons, ambulances, harness, &c., on hand at the beginning of the fiscal year ended June 30, 1883, the number purchased, &c., during the year, and the number remaining on hand June 30, 1883, as shown by the returns of quartermaster's stores received at this office:

Military departments.	Army wagons.				Spring wagons.				Ambulances.			
	On hand July 1, 1882.	Purchased.	Sold, lost, destroyed, &c.	Remaining on hand June 30, 1883.	On hand July 1, 1882.	Purchased.	Sold, lost, destroyed, &c.	Remaining on hand June 30, 1883.	On hand July 1, 1882.	Purchased.	Sold, lost, destroyed, &c.	Remaining on hand June 30, 1883.
Department of the Missouri	1,066	2	59	908	98	....	4	86	33	....	4	66
Department of Texas	314	....	12	209	38	....	2	21	11	....	2	6
Department of the Platte	398	....	34	359	44	....	5	60	21	....	2	24
Department of Dakota	570	....	54	485	73	....	4	63	37	....	5	27
Department of Arizona	178	....	10	81	16	....	1	7	.....	....	.....	.....
Department of California	102	1	12	36	21	....	1	10	1	....	.....	1
Department of the Columbia	86	....	5	78	17	....	2	13	3	....	.....	3
Department of the South	20	....	3	21	11	....	.....	8	9	....	1	7
Department of the East	164	21	.....	50	47	2	.....	22	8	....	.....	6
Department of West Point	11	....	.....	17	3	....	.....	2	1	....	.....	1
Totals	2,909	24	189	2,244	368	2	19	293	124	....	14	141

Military departments.	Wagon harness.				Ambulance harness.				Cart harness.			
	On hand July 1, 1882.	Purchased.	Sold, lost, destroyed, &c.	Remaining on hand June 30, 1883.	On hand July 1, 1882.	Purchased.	Sold, lost, destroyed, &c.	Remaining on hand June 30, 1883.	On hand July 1, 1882.	Purchased.	Sold, lost, destroyed, &c.	Remaining on hand June 30, 1883.
Department of the Missouri	2,268	2	474	3,412	704	....	144	846	103	55	19	79
Department of Texas	1 693	....	190	1,013	410	....	42	270	51	....	20	81
Department of the Platte	2,090	1	207	1,956	605	2	82	620	47	8	4	51
Department of Dakota	2,968	4	431	2,545	900	....	68	613	182	....	22	91
Department of Arizona	750	....	35	356	445	....	59	252	48	....	8	45
Department of California	793	4	51	657	108	5	6	78	60	2	8	30
Department of the Columbia	587	....	67	567	140	....	11	138	39	....	4	40
Department of the South	87	....	42	37	65	....	19	48	61	....	6	55
Department of the East	292	6	9	117	1,144	1	19	128	101	14	7	89
Department of West Point	28	....	2	16	2	....	.....	7	6	....	2	4
Totals	11,556	17	1,508	10,676	4,523	8	450	3,000	698	79	100	565

Statement of fuel, forage, and straw issued during the fiscal year ended June 30, 1883, as shown by the returns of quartermasters' stores received at this office.

	Cords.	Tons.	Bushels.
Wood, hard	39,630	.....	.....
Wood, soft	72,966	.....	.....
Coal, anthracite	.....	23,798	.....
Coal, bituminous	.....	26,025	.....
Hay	.....	47,028	.....
Fodder	.....	83	.....
Straw	.....	2,945	.....
Oats	.....	.....	842,968
Corn	.....	.....	420,706
Barley	.....	.....	154,997
Bran	.....	.....	119,695

Returns have been made to this date of proceeds of sales of quartermasters' property to officers and soldiers of the Army during the last fiscal year, amounting to $128,091.33.

This amount has been credited to appropriations as follows:

Regular supplies	$95,434 96
Incidental expenses	5 48
Cavalry and artillery horses	5,074 80
Barracks and quarters	8 59
Army transportation	545 25
Clothing and equipage	27,022 25
Total	128,091 33

Statement of returns of clothing and equipage received and examined, and of letters received and written relating to their settlement, during the fiscal year ending June 30, 1883.

Number of returns on hand June 30, 1882	1,439
Number of returns received during the fiscal year	3,805
Total	5,244
Number of returns examined during the fiscal year	3,116
Number of returns on hand for examination June 30, 1883	2,128
Number of letters received pertaining to settlement of accounts, and to inspection reports and boards of survey	3,819
Number of letters written pertaining to settlement of accounts, and to inspection reports and boards of survey	7,892

Statement of the clerical force employed in the division of clothing and equipage accounts of the Quartermaster-General's Office during the fiscal year ended June 30, 1883.

	Clerks.	Copyists.	Assistant messenger.	Laborer.	Total.
On June 30, 1882	8	1	.....	1	10
On June 30, 1883	9	1	1	.....	11

Very respectfully, your obedient servant,

ALEX. J. PERRY,
Assistant Quartermaster-General,
United States Army.

The QUARTERMASTER-GENERAL, U. S. A.

3.—*Annual report of Capt. J. F. Rodgers, military storekeeper, United States Army, of the operations of the Clothing Supply Branch of the Quartermaster-General's office for the fiscal year ending June 30, 1883.*

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

GENERAL: I have the honor to submit the annual report of the Clothing Supply Branch of this office.

The principal work, as in former years, has been confined to the purchase and manufacture of clothing, equipage, and materials required by the Army, its distribution to the various departments and military divisions under existing regulations from the purchasing and manufacturing depots, and the Military Prison at Fort Leavenworth, Kans., where a portion of the supplies for the Army are being made.

There was appropriated by Congress for clothing and supplying the Army with the necessary equipage, such as tents, flags, drums, &c., the sum of $1,400,000. There was deposited to the credit of the appropriation $69,261.96, derived from sales to officers and on account of clothing drawn by the enlisted men in excess of the regular established allowance, making a total of $1,469,261.96.

From this sum there was remitted to the various officers of the Department $1,434,383.98, leaving a balance in Treasury on the 30th June, 1883, of $34,877.98, which will be needed to pay for articles ordered to be purchased or already contracted for.

Owing to the complete exhaustion of the stock of clothing in depot, very little progress has been made towards accumulating a working stock of such articles as may be needed for a sudden emergency, such as may arise at any time. Great care has been exercised to avoid accumulation of unnecessary clothing at posts.

Careful estimate shows that the sum of $1,400,000 will absolutely be required for clothing the Army of the United States during the fiscal year ending June 30, 1885. This estimate is based upon the actual quantities to which the Army is entitled by regulations, and the prices at which recent contracts have been awarded, which, to a certain extent, were lower than those of last year.

Requisitions from the Army for supplies have been filled as promptly as circumstances would permit, and although in some cases issues had to be delayed until a supply was received from contractors, no case of actual suffering for want of clothing has been brought to the attention of this office.

The accompanying statement, A, shows, in a consolidated form, the actual work performed by this branch of the Department, comprising purchases, manufactures, and issues at the general depots at Philadelphia, Pa., Jeffersonville, Ind., San Francisco, Cal.; purchases made under the direction of the chief quartermaster military division of the Missouri, and purchases and manufactures at the military prison at Fort Leavenworth, Kans. It shows the articles on hand at the general depots, June 30, 1882; the quantities purchased, manufactured, received by transfer from one depot to another, and from military posts and distributing depots; the articles gained, sold, transferred to general depots, *issued to the Army*, and the quantities on hand June 30, 1883.

Among the articles purchased may be mentioned 5,054 buffalo overcoats, 11,847 fur caps, and 7,378 pairs fur gauntlets, costing the Department about $95,000. Under existing regulations these articles were used by the troops at the cost of the Government, remaining the property of the Department. Experience has demonstrated, however, the fact that this manner of issue has led to great abuse, and steps have been taken to hereafter issue the caps and gauntlets to the enlisted men at cost price, in the same manner in which the campaign hats, cork helmets, and Arctic overshoes are now issued, and confine the use of the buffalo overcoats to the troops on guard duty and such expeditions as may involve the loss of life or limb from exposure to the rigid climate in the extreme northern latitudes. The price at which the contract for buffalo overcoats for the present fiscal year was awarded ($12.95 each) demonstrates that the pelts from which they are made are becoming scarcer from year to year, and that the Department will ultimately be compelled to have recourse to some other material. Anticipating this, there were purchased during the last fiscal year a limited number of sheepskin overcoats, and canvas overcoats lined with sheepskin. There

were also manufactured at the Philadelphia depot a limited number of canvas overcoats, lined with a heavy woolen blanket fabric.

From reports received it appears that during a trial in active service the sheepskin coats were found to be defective in this, that they are pervious to sleet and rain. The canvas blanket-lined overcoats, however, have given great satisfaction. They are declared to be equally as warm and comfortable as the buffalo coats, and it is believed that an acceptable substitute for the latter has at last been found. In procuring further supplies some will be purchased for a more extended trial. They will be made according to a pattern which is now being prepared under the direction of the Quartermaster-General.

One of the most important articles of clothing, and upon which in a great measure depends the efficiency of the Army, is the boot and shoe of the enlisted man. After ten years use it has positively been demonstrated that the present brass-screwed boot and shoe is not what is wanted. The pattern itself is clumsy, and the uppers do not give sufficient room for the toes. The upper leather, while of good quality, is too heavy, and ought to be more pliable. The soles are stiff and unyielding to the tread of the foot, rendered especially so by the insertion of the brass screw, which penetrates and hurts the foot of the wearer—in fact, disables him. One of the most serious objections is that the screws are conductors of heat and cold. Instances have been reported where, in cold weather, the perspiration of the foot has been turned into a layer of white frost, the stocking freezing to the sole of the shoe.

Under instructions from the Quartermaster-General the undersigned, during the last fiscal year, devoted considerable time in studying this question, and finally, on the 9th of April last, submitted his report. In this report I had the honor to point out the defects of the present shoe, based upon the opinion of officers of the Army and my own, and recommended a return to a sewed shoe; each size to be made of two widths, on an A and a B last; two kinds of shoes to be furnished, one for dress occasions or garrison duty, and another for active service in the field or on the frontier. I also recommended such changes in the materials as would lead to the comfort of the enlisted men. The Quartermaster-General approved of this report and recommended to the honorable the Secretary of War the manufacture, at the Military Prison, of 250 pairs of each of the two kinds of shoes according to patterns and lasts submitted by me. Upon reference to the Inspector-General, that officer reported that the information contained in the various reports of inspections received at his office closely accorded with my views, which he considered "highly judicious," and recommended that 500 pairs be manufactured for trial. The Secretary of War, on the 9th May, 1883, approved the recommendation of the Quartermaster-General, and the shoes were ordered to be manufactured at the Military Prison. They are now ready for distribution and trial.

Copy of my report of the action of the War Department, also drawings of the sample shoes, are submitted herewith, marked L.

The contracts for wax upper leather have been so made that, so soon as the manufacture of the proposed style of boot and shoe may be determined upon, a different kind of upper leather can be immediately procured without being compelled to continue the purchase of the kind now used.

On June 26, 1882, the State Department transmitted to the War Department a communication from Maj. S. A. Salquin, of the Seventh Regiment of Swiss infantry, and secretary of the military department of the Swiss Confederation, forwarding a book descriptive of his views upon

the subject of boots and shoes for army use, accompanied by illustrative samples. These papers and samples were referred to the governor of the Military Prison at Fort Leavenworth, Kans., under whose supervision the boots and shoes for the Army are being manufactured, who reported that if lasts made upon Major Salquin's principle were furnished him, some could be made for trial; that the samples, with few exceptions, were not superior to the boots and shoes made for the Army at the prison. A copy of his report has been furnished by the honorable the Secretary of War to the State Department. There can be no doubt that the principles advocated by Major Salquin, as shown in his admirable treatise, are valuable, and in studying the question of providing a suitable foot-gear for the Army of the United States his views should meet with the consideration which they certainly deserve.

A copy of the book of Major Salquin, translated and printed under direction of the Quartermaster-General, is submitted herewith, marked M.

In compliance with the orders of the Quartermaster-General of September 6, 1882, based upon instructions of the War Department of August 21, 1882, directing me to proceed to Philadelphia, Pa., Jeffersonville, Ind., Saint Louis, Mo., and San Francisco, Cal., and inspect the manufacturing depots of clothing and equipage of the Quartermaster's Department located at those points, extending the trip to such posts as might come within my line of travel, and make such observations on the subject of clothing and equipage as might present themselves, I made the journey indicated, and on the 18th November last had the honor to submit my report in writing. I found those depots in excellent working order, and very little to suggest as to improvement in the management of manufacturing. I found a considerable accumulation of equipage, such as mess-pans, camp-kettles, company, regimental, and post books, spades, all the old pattern drums and fifes, and articles of like character. This property was purchased during the late civil war, and as the demand for it is only limited, the large quantities, independent of taking up storage room, are from natural causes fast deteriorating.

Authority has been obtained from the War Department to sell all the surplus not required for issue during the next five years, after inviting proposals by advertisement, and instructions to dispose of it have been given.

It having been customary to use the old and worn-out tentage at the Jeffersonville depot for baling purposes, being cotton, and old and tender, and in some cases mildewed to worthlessness, their value as baling material is little, while if sold at public auction they will bring more than the cost of new baling cloths, independent of the great waste occasioned in cutting up the tents. Instructions to hereafter sell this class of property have been given. Unfortunately, the proceeds of these sales cannot be utilized by the Department in purchasing other baling materials, as under the law all proceeds of sales must be covered into the Treasury to the credit of miscellaneous receipts.

From my observations while on this tour, visiting the high latitudes of Dakota and Montana, the Pacific coast, and the hot and arid Territories of Arizona and New Mexico, I have come to the conclusion that the Army generally is well clothed, and that it is fully aware of it. At each post I was received with courtesy, and every officer with whom I came in contact seemed desirous to give me all the information possible.

From conversations with officers I found that the helmets are generally satisfactory, and a great improvement upon the former head cov-

ering of the enlisted men. Some complaints were made that the chin straps were too short. The ventilators are somewhat insecure, and should be made stronger to bear the strain of the spike and plume socket. In cold weather the chin-strap cracks, and a desire was expressed to substitute a chain chin-strap for the enameled leather. A wish was also expressed that the mounted men be permitted to wear the spike on guard duty and upon occasions when the plume would be troublesome; also that the shell ventilator furnished with the present helmet be dispensed with. Col. John P. Hatch, Second Cavalry, suggested that the color of the hair plume for cavalry be changed from yellow to black, and several of his officers concurred with him.

CORK HELMETS.

The laminated sheet-cork helmets are fairly popular, but those made of crushed cork are not only unpopular, but objectionable and unserviceable, rendered so by the crushed cork becoming disintegrated. As to color, a preference was expressed to those covered with brown linen over those covered with white serge. Purchases for the present fiscal year have been confined to the helmets made of sheet cork.

CAMPAIGN HATS.

I found that while some of the enlisted men like the present all-wool hat, costing 67 cents, a desire was indicated for a fur hat of better quality. As to color, opinion is divided, some preferring a black, and others a drab or slate-colored hat. The one thousand drab-colored hats, referred to in last year's annual report as having been shipped to Arizona, New Mexico, and Texas, were distributed for trial, and from reports received it is ascertained that they have met with great favor, and, as a result, the Quartermaster-General determined to order the purchase of one thousand additional hats of the same quality, but having on each side a larger ventilating hole or eyelet. Orders for purchase have been given and distribution will be made as soon as they are ready for issue.

METALLIC CAP AND COAT ORNAMENTS.

Considerable complaint was made that the hooks and other metal fastenings for caps and coats are so easily broken while in process of cleaning. Experiments thus far made have failed to develop any better mode of fastening. By making the ornament of metal, nickel-plated, requiring no cleaning at all after being once fastened, would, perhaps, obviate the difficulty.

OVERCOATS.

These garments, as now made, are universally and justly popular. The only difficulty (already referred to in the annual report for the last fiscal year, and again brought to the attention of the Quartermaster-General) is that the yellow cape-lining flannel rubs off on the body of the coat. The contractors for this flannel should be held to a strict accountability as to the fastness of the yellow color. I noticed that the strap at the back of the coat is taken away by most of the enlisted men, and, in my judgment, might well be dispensed with altogether, thereby lessening the cost of the coat.

UNIFORM DRESS-COATS.

At every post I heard complaints against this article of uniform, based principally upon the shortness of the waist and skirts and the fading of

the facings. The cloth was also not deemed fine enough. Action has been and is now being taken to improve the patterns, and a new standard of dark blue indigo coat-cloth of finer quality has been adopted, and purchases conforming thereto are now being made. All uniform coats hereafter to be manufactured will be made out of this cloth. The fading of the facings, especially of the yellow and light blue, is beyond the control of this department, as all high or bright colors are more or less fugitive in this climate. Col. A. McD. McCook, of the Sixth Infantry, suggests that the number of the regiment be omitted on the collar of the dress-coat, as the facings become soiled by contact with the metal. I agree with Colonel McCook upon this point, as the number of the regiment is already worn on the helmet eagle. With the adoption of a finer grade of dark blue cloth it was found necessary to also improve the quality of the brass buttons, and a much better and handsomer pattern, and of brass more easily cleaned, has been adopted. Until the old stock shall have become exhausted, the new buttons will be used exclusively on the uniform coats made out of the new cloth.

RE-MAKING CLOTHING.

While studying this question of uniform coats, it was very forcibly brought to my mind to what extent the re-making of clothing issued by this department is actually carried on. The Quartermaster-General, fully aware of this, what may be called existing evil, and determined to overcome it if possible, has recently devoted his special attention to this particular subject. One of the results has been the promulgation of a general order from the War Department authorizing the issue of unmade garments, and charging them to the soldier at actual cost, he being credited on his clothing allowance with the cost of the made-up garments. The difference in cost, or the actual price paid by the Government to operatives for making them, goes to the credit of the soldier.

In further consideration of the fact that the recruits on their first entry into the service are without money to pay for altering their clothing, the Quartermaster-General has recommended to the War Department that the sum of $5 additional clothing money be credited to each recruit for the first year of his enlistment, to pay the expense of altering or fitting the clothing to his person. It is hoped that the relief thus given will have a salutary effect.

BLOUSES AND DARK-BLUE OVERSHIRTS.

A universal desire was expressed to have the cord indicating arm of service, omitted on both the blouse and dark blue overshirts, as it fades by exposure or washing. The recommendation of this office that this be done, has been approved by the War Department, and both the blouse and shirt are now issued without the cord. This change is in the true interest of economy, for it saves the cost of the cord and sewing it on, and it will do away with an accumulating of garments for the various arms of the service at almost every post. The opening in the front of the shirts not being considered long enough, a new standard having a longer opening has been adopted.

Some of the officers desired to have the shirts made double-breasted, with a shield front. To do so would add materially to the cost of the present pattern. I found a great many who preferred the gray flannel shirt, but of a finer grade than heretofore issued. As the gray flannel is not as expensive as the dark blue all-wool flannel, perhaps such a

shirt, made-double-breasted, would meet with favor in the Army, and I respectfully recommend that trial on a limited scale be made.

STABLE FROCKS AND OVERALLS.

These are made from the shelter tents left over from the late civil war, and no complaints about these garments have reached this office. The Quartermaster-General has recently directed experiments in dyeing these tents to a brown color to be made, with a view to manufacturing therefrom fatigue coats and overalls for issue to troops of all arms of the service for police purposes, and at posts in hot climates.

If fur clothing is a proper issue to the men for their health and comfort in the extreme cold climates, the issue of dyed cotton garments would be equally proper to troops serving in the hot and dry regions of Arizona, New Mexico, and Texas. Independent of comfort, these cotton garments will save the articles of woolen clothing from wear and tear incidental to the work to which the soldier is put while on police and other fatigue duties.

TROUSERS.

The shape of the trousers is found fault with, and efforts are now being made to introduce twelve instead of five sizes, and manufacture them with spring bottoms, to overcome the complaints generally made. One officer suggested that only one grade of kersey be used for trousers, but that for summer wear a sky-blue flannel be substituted for the kersey of light quality.

UNDERCLOTHING.

Knit shirts and woolen stockings are generally liked and are satisfactory. As to drawers, the only suggestion, viz, that they be made fuller in the seat, and that buttons be used in place of the tape for tying them at the bottom, has been carried out, and the new standards are so made.

BERLIN GLOVES.

Berlin gloves are generally satisfactory, but the issue by sets consisting of two rights and one left was found to be unanimously unpopular. Reports were especially called for from posts in the Military Divisions of the Atlantic, Missouri, and Pacific, and from these it appears that a return to the old system of issuing by pairs was not only desirable but important, as the practice complained of had led to a large accumulation of right-hand gloves. Issues are now again made by pairs, and purchases are made of a large proportion of lefts to properly size them up. In the tariff the number of pairs of the smaller sizes should be decreased, while those of the larger size should be increased.

OVERSHOES.

Arctic overshoes may be considered as almost indispensable articles of the clothing allowance on the northern frontier. Suggestions were made that they be made higher above the ankle and somewhat lighter, and that the buckle be sewed on stronger.

BLANKETS.

The woolen blankets manufactured on the Pacific coast and furnished under contract are of unexceptionable quality, while those manufact-

ured in the East are not so popular. Great care should be exercised in their inspection. It is suggested that the woolen blankets be hereafter packed and shipped in boxes instead of subjecting them to heavy pressure while being baled, thereby taking away their appearance of freshness. As most of the military posts are near the railroads, the necessity of baling the articles of clothing is not so great as formerly, and officers expressed themselves to that effect.

ARTICLES OF EQUIPAGE.

The condition of all the articles of equipage supplied by the Quartermaster's Department is generally found to be satisfactory. Some difference of opinion exists as to style of tents. This subject is now under consideration by the Quartermaster-General, who is devoting his personal attention to certain improvements in conical tents with walls of different heights and shape. Under his direction a limited number of common tents, having a wall attached, have been manufactured. They are now being tried at the summer camp of the Second Artillery, at Gaithersburg, Md. Reports upon the advantages of these new tents have not yet been made to this office, but it is learned that they meet with favor.

DRUMS.

The stock of drums of proper size, left over from the late war, having become depleted, requiring the purchase of a new supply, steps were taken to adopt a new pattern to take the place of the cumbersome and antiquated model. After examining a number of samples procured for the purpose, and making a few changes which suggested themselves, a pattern much lighter and better was adopted. A limited supply has been purchased, and issues of drums of the new pattern are now being made only.

OPERATIONS OF LAST FISCAL YEAR.

During the past fiscal year the following specifications for clothing and equipage have been either amended or adopted, and distributed to the officers of the Quartermaster's Department, viz: Scrubbing-brushes, trousers, barrack chairs, helmets, drum slings, drums, cotton stockings, blouse-lining flannel, dark blue shirting and cape-lining flannel, dark blue indigo coat-cloth, dark blue overshirts, blouses, and drawers.

The following standards were distributed to the general depots of the Quartermaster's Department during the last fiscal year, as guides in purchasing supplies, viz:

Scrubbing-brushes, October 3, 1882.
Trousers, October 10, 1882.
Barrack chairs, October 11, 1882.
Helmets, November 4, 1882.
Drums, January 23, 1883.
Muskrat caps and gauntlets, March 9, 1883.
Cotton stockings, March 12, 1883.
Gray blouse-lining flannel, April 2, 1883.
Dark blue overshirts, April 12, 1883.
Dark blue coat-cloth, April 19, 1883.
Drawers, May 14, 1883.

Statement H, accompanying the annual report of the Clothing Supply Branch for the last fiscal year, shows in detail the articles of equipage which, by direction of the Secretary of War, were issued during that

year under joint resolution of Congress, approved March 10, 1882, for the relief of the sufferers by the overflow of the Mississippi River. Of the property specified, the following have not been returned, viz: 125 hospital tents, 229 hospital-tent poles, uprights, 111 hospital-tent poles, ridge, and 5,666 hospital-tent pins. The value of this property is $4,359.89, and the Secretary of War has approved the recommendation of this office that the officer responsible be relieved from further responsibility, as it is not probable that any of the property can, at this late day, be collected. The articles have been ordered to be dropped from the returns of the officer responsible.

This once more points out the utter lack of care and responsibility on the part of borrowers of public property. In no case has any loan of property ever been made by this Department without loss or damage to the Government. It should be discouraged, and, when not absolutely required for the preservation of life and property, positively refused.

The accompanying statement, marked E, shows the articles of old-pattern clothing turned over to the National Home for Disabled Volunteers, under the act of March 3, 1881, during the last fiscal year. Very few articles of clothing coming under this act are believed to be on hand at posts.

The boots, shoes, chairs, and corn brooms required by the Army have all been manufactured at the Military Prison, as required by the rules and regulations of the War Department. There were made during the last fiscal year, from materials purchased by the Governor of the prison under direction of this office, 35,000 pairs boots, costing 2.63\frac{1}{2}$ per pair, or, adding 20$\frac{3}{4}$ cents per pair for prison labor, 2.84\frac{1}{12}$ per pair; 30,000 pairs of shoes, costing 1.78\frac{1}{2}$ per pair, or, adding cost of prison labor, 1.88\frac{5}{8}$ per pair; 4,000 barrack chairs, costing 1.12\frac{3}{4}$ each, and with cost of prison labor 1.26\frac{3}{4}$ each; and 30,000 corn brooms, costing 24$\frac{1}{8}$ cents each, and with prison labor added 29$\frac{19}{24}$ cents each. The cost of all the material was $153,651.52; of civilian labor, $3,502; of prison labor, $12,659.40; and of royalty on machines, $320.80; making a total cost of $170,133.72. As the prison earnings cannot be used for the support of the prison, the appropriation for clothing has only been drawn upon to the amount of $157,474.32. Information in detail can be obtained from the accompanying statement marked K. The value of scrap leather sold during the fiscal year was $802.44; but as the money derived from this sale cannot be used, but under the law must be covered into the Treasury and credited to miscellaneous receipts, the amount has not been taken into consideration in establishing the prices of boots and shoes.

Statements G and H, herewith, show the articles of clothing and equipage, valued at $3,362.62, and of quartermaster's stores, valued at $1,613.72, which were transferred to the Military Prison during the last fiscal year.

The total value of labor performed by the Military Prison, chargeable to appropriation for clothing and equipage, has been $12,628.25, whilst the labor performed for the Quartermaster's Department, such as making harness, boxes and crates for shipping, stone-cutters, laborers, &c., amounts to $15,341. Full and complete information, showing in detail the transactions between the Military Prison and the Quartermaster's Department, can be obtained from accompanying statements marked G to K, inclusive.

Upon the requisition of Lieut. E. A. Garlington, Seventh Cavalry, acting signal officer commanding detachment, approved by the Chief Signal Officer of the Army, the clothing and equipage, valued at

$2,600.96, specified in statement F, accompanying this report, were furnished by this department to the detachment of the Lady Franklin Bay Expedition.

A report upon the trial of certain articles of clothing and equipage submitted to the vulcanite process for water, moth, and mildew proofing, upon which the sum of $100 was ordered to be expended, referred to in the annual report for the last fiscal year, has been made by the officer in charge of the depot at Philadelphia, Pa., where said trial was conducted. It appears that the process, so far as its water-repellant qualities are concerned, gives the prepared fabric a slight percentage of advantage over the article not treated. The claim that the process adds weight and strength to the articles to which it is applied is not supported by tests carefully made. All the articles treated, with one exception, have been injured by the ravages of moth; hence the process does not render articles of woolen clothing moth-proof.

The illustrations of the uniform of the Army, which the honorable the Secretary of War authorized to be published, have been completed and distributed to the generals commanding divisions and departments, and to the commanding officers of regiments and companies, as well as to the officers of the Quartermaster's Department. The edition being limited, the numerous applications for copies from other officers of the Army, and from civilians, could not be favorably considered.

On the 20th March last the attention of this office was called to certain plans, descriptions, and price-list of the "Doecker felt tents," which Mr. Hans Puggard, through the legation of the United States at Paris, brought to the notice of the War Department, with a view to their adoption by the United States. The Surgeon-General of the Army, to whom the papers were referred, recommended, in order to ascertain their merits, that a few of them be purchased for trial in actual service. Upon the recommendation of the Quartermaster-General, authority was given by the War Department to purchase three of the tents, and orders to do so have been given to the officer in charge of the depot at New York. It is understood that the tents have arrived from abroad. Distribution will be made hereafter.

On June 1, 1882, the Quartermaster-General directed the purchase, for trial in active service, of six sets of perforated buckskin undergarments, at a cost of $72. They were shipped to the chief quartermaster Military Division of the Missouri for distribution, and, from reports received from six different posts in the Department of Dakota, it appears that these garments are very much liked. They are declared to be exceedingly warm and comfortable. But the great cost of the garments will necessarily exclude their introduction into the Army as an article of issue.

In order to encourage the enlisted men of the Army in drawing the blouses altered from the obsolete pattern dark blue shirts, in lieu of the regulation blouses, the Quartermaster-General recommended their issue at a reduced price, and the honorable the Secretary of War has authorized that the issue price be fixed at $2 each.

CLERICAL FORCE.

As to the clerical force of the Clothing-Supply Branch, consisting of 4 clerks and 1 copyist, I desire to state that all the work is kept up to date. There were received 2,157 letters, and 3,564 letters have been written, independent of the miscellaneous work, estimates and statements which it is deemed unnecessary to describe in this report.

TABULAR STATEMENTS.

For full and more detailed information, permit me to refer to the accompanying tabular statements, viz:

A.—Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department June 30, 1882; the quantities purchased, manufactured, received from posts and depots, taken up, sold, transferred to general depots, expended, issued to the Army, and the quantities remaining in depot June 30, 1883.

B.—Statement of amounts received and expended by the Quartermaster's Department on account of clothing and equipage during the fiscal year ending June 30, 1883.

C.—Statement showing remittances on account of clothing and equipage during the fiscal year ending June 30, 1883.

D.—Specifications for clothing, equipage, and materials for the manufacture of clothing and equipage, adopted or amended and distributed to the officers of the Quartermaster's Department during the fiscal year ending June 30, 1883.

E.—Statement showing articles of old-pattern clothing turned over to the National Home for Disabled Volunteers under the act of March 3, 1881, during the fiscal year ending June 30, 1883.

F.—Statement showing articles of clothing and equipage issued by the Quartermaster's Department to the detachment of the Lady Franklin Bay Expedition during the fiscal year ending June 30, 1883, and money value of the property.

G.—Statement showing articles of clothing and equipage issued to the Military Prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1883, and money value of the property.

H.—Statement showing articles of quartermaster's stores issued to the Military Prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1883, and money value of the property.

I.—Statement showing value of labor performed for the Quartermaster's Department by the Military Prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1883.

K.—Statement showing articles of clothing and equipage manufactured at the Military Prison at Fort Leavenworth, Kans., for the Quartermaster's Department during the fiscal year ending June 30, 1883; also cost of material, labor, &c.

L.—Copy of report of Capt. J. F. Rodgers, M. S. K., U. S. A., dated April 9, 1883, relating to improvements in boots and shoes for the enlisted men of the Army, with copy of action of the honorable the Secretary of War upon the subject, and copies of drawings of patterns of shoes recommended for trial.

M.—Copy of book on the "military shoe," translated and printed by direction of the Quartermaster-General from the original of Maj. S. A. Salquin, of the Army of the Swiss Confederation, with twenty illustrations inserted in the text.

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

The QUARTERMASTER-GENERAL OF THE ARMY.

A.—*Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department, June 30, 1882, the quantities purchased, manufactured, received from posts and depots, taken up, sold, transferred to general depots, expended, issued to the Army, and the quantities remaining in depot June 30, 1883.*

Articles.	On hand June 30, 1882.	Purchased.	Manufactured.	Received from general depots.	Received from posts and distributing depots.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1883.
Helmets, untrimmed.....number..	2,016	15,000	.....	1,801	462	.....	19,279	2	2,818	16	12,504	14,640	4,639
Helmets, cork.....do....	212	8,033	.....	.....	.....	.....	8,245	4	.....	.....	7,505	7,509	736
Helmet hair-plumes.....do	3,722	3,900	.....	530	154	.....	8,306	.....	1,224	8	4,469	5,701	2,605
Helmet cords and bands.....do....	2,490	5,800	.....	530	158	.....	8,978	.....	1,180	8	4,447	5,635	3,343
Helmet chin-straps .....do....	.....	330	.....	.....	.....	.....	330	.....	.....	.....	323	323	7
Helmet top-bases.....do....	4,138	24,000	.....	2,858	2,204	.....	33,200	.....	1,806	16	14,354	16,176	17,024
Helmet plume-sockets.....do....	2,545	9,000	.....	1,030	2,188	.....	14,763	.....	1,330	8	5,928	7,266	7,497
Helmet spikes.....do....	1,594	15,000	.....	1,608	.....	.....	18,202	.....	1,056	8	9,536	10,600	7,602
Helmet eagles.....do....	10,614	31,000	.....	1,850	482	.....	43,946	.....	2,056	16	13,915	15,987	27,959
Helmet scrolls and rings.....do	2,491	20,000	.....	650	266	366	23,773	.....	2,500	16	8,810	11,326	12,447
Helmet side-buttons.....do....	20,248	70,000	.....	3,700	521	.....	94,469	.....	4,952	32	29,224	34,208	60,261
Helmet numbers.....do....	16,084	60,000	.....	.....	41	.....	76,125	.....	4,250	56	25,961	30,267	45,858
Helmet devices.....do....	921	4,000	.....	218	4	.....	5,143	.....	224	.....	916	1,140	4,003
Dress caps.....do....	6,318	.....	.....	.....	228	.....	6,546	1,205	.....	.....	12	1,217	5,329
Forage caps.....do....	4,042	35,500	.....	4,980	214	.....	44,736	2	5,431	.....	32,070	37,503	7,233
Forage-cap covers.....do....	.....	.....	.....	.....	43	.....	43	.....	.....	.....	.....	.....	43
Fur caps .....do....	153	11,847	.....	565	130	.....	12,695	1	663	4	6,348	7,016	5,679
Campaign hats.....do....	6,839	14,960	.....	4,510	121	.....	26,430	24	4,513	.....	15,373	19,910	6,520
Campaign hat cords and tassels..do....	29,332	.....	.....	.....	253	.....	29,585	.....	.....	.....	750	750	28,835
Pompons.....do....	5,273	.....	.....	.....	191	.....	5,464	1,205	.....	13	12	1,230	4,234
Cap eagles.....do....	8,026	.....	.....	.....	93	.....	8,119	8,019	.....	.....	.....	8,019	100
Cap crossed cannon.....do....	4,490	10,000	.....	.....	652	.....	15,142	.....	.....	3	5,446	5,449	9,693
Cap crossed sabers.....do....	11,081	.....	.....	500	389	.....	11,970	.....	1,500	3	8,017	9,520	2,450
Cap crossed rifles.....do....	13,770	20,000	.....	500	334	.....	34,604	.....	500	6	10,382	10,888	23,716
Cap castles.....do....	1,365	.....	.....	.....	.....	.....	1,365	.....	.....	.....	231	231	1,134
Cap shells and flames.....do....	1,001	.....	.....	.....	5	.....	1,006	.....	.....	.....	266	266	740
Cap crescents .....do	156	.....	.....	20	2	.....	178	.....	20	.....	73	93	85
Cap wreaths .....do....	1,918	.....	.....	17	.....	.....	1,935	.....	25	.....	111	136	1,799
Cap bugles.....do....	11,902	.....	.....	10	.....	.....	11,912	.....	.....	.....	947	947	10,965
Cap numbers.....do....	43,982	99,167	.....	6,500	1,537	.....	151,186	.....	6,500	30	43,718	50,243	100,943
Numbers, white metal.....do	931	.....	.....	4,250	.....	.....	5,181	.....	.....	.....	3,760	3,760	1,421
Letters, brass .....do....	38,071	100,000	.....	1,500	1,795	.....	141,366	.....	1,500	36	44,035	45,571	95,795
Letters U. S.....do....	59	.....	.....	.....	.....	.....	59	59	.....	.....	.....	59	.....
Overcoats.....do....	1,253	.....	12,501	48	2,832	.....	16,634	2	.....	.....	11,766	11,768	4,866
Overcoats, buffalo.....do....	36	5,054	.....	.....	7	.....	5,097	.....	133	.....	2,951	3,084	2,013
Uniform coats, musicians' moun'd..do....	153	.....	69	.....	49	.....	273	.....	.....	.....	125	125	148
Uniform coats, privates' mounted..do....	2,194	.....	1,058	.....	.....	.....	3,252	.....	.....	.....	905	905	2,347

A.—*Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department, June 30, 1882, &c.*—Continued.

Articles.	On hand June 30, 1882.	Purchased.	Manufactured.	Received from general depots.	Received from posts and distributing depots.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1883.
Uniform coats, musicians' foot.....number	354	.....	40	.....	35	.....	429	1	.....	.....	121	122	307
Uniform coats, privates', foot.....do	8,986	.....	634	4	271	.....	9,895	8	4	1	1,931	1,944	7,951
Uniform coats, private's, foot and mounted, unmade.....number	.....	.....	2	.....	.....	.....	2	.....	.....	2	.....	2	.....
Coat crescents.....do	150	.....	.....	15	2	.....	167	.....	15	.....	103	118	49
Coat castles.....do	980	.....	.....	.....	.....	.....	980	.....	.....	.....	2	2	978
Coat shells and flames.....do	937	.....	.....	.....	.....	.....	937	.....	.....	.....	250	250	687
Blouses, lined.....do	17,044	.....	14,874	.....	192	16,581	48,691	65	156	.....	32,670	32,891	15,800
Blouses, unlined.....do	2,062	.....	5,416	156	1,622	1,381	10,637	470	.....	192	7,914	8,576	2,061
Sack coats.....do	70	.....	.....	.....	.....	.....	70	.....	.....	.....	.....	.....	70
Stable frocks.....do	6,805	.....	7,733	.....	176	300	15,014	4	.....	.....	7,936	7,940	7,074
Overalls, engineers.....pairs	209	.....	394	.....	.....	.....	603	.....	.....	.....	392	392	211
Overalls, cavalry and artillery.....do	9,914	.....	7,512	.....	169	.....	17,595	1	.....	.....	11,510	11,511	6,084
Trowsers, mounted, made.....do	4,938	.....	15,187	.....	116	4	20,245	.....	.....	4	12,709	12,713	7,532
Trowsers, foot, made.....do	9,207	.....	22,367	.....	377	.....	31,951	.....	.....	6	18,779	18,785	13,166
Trowsers, mounted, unmade.....do	784	.....	14,061	.....	33	48	14,926	.....	.....	.....	14,708	14,708	218
Trowsers, foot, unmade.....do	824	.....	23,076	.....	305	67	24,272	.....	.....	.....	23,902	23,902	370
Suspenders.....do	.....	144	.....	.....	.....	.....	144	.....	.....	.....	9	9	135
Shirts, flannel, gray.....number	9,047	.....	4	4,000	6,429	.....	19,480	.....	1,000	4	12,023	13,027	6,453
Shirts, D. B., over.....do	27,812	.....	64,758	.....	11,341	109	104,020	3	.....	19,008	61,049	80,060	23,960
Shirts, knit, under.....do	372	106,967	.....	.....	159	.....	107,498	35	.....	.....	100,099	100,134	7,364
Drawers.....pairs	19,330	.....	84,060	.....	162	137	103,689	19	.....	25	84,169	84,213	19,476
Drawers, suspensory.....do	105	.....	.....	.....	.....	.....	105	.....	.....	.....	.....	.....	105
Stockings, woolen.....do	5,507	101,419	.....	.....	281	248	107,455	45	.....	.....	103,911	103,956	3,499
Stockings, cotton.....do	135	180,984	.....	.....	7	21	181,147	41	.....	.....	131,541	131,582	49,565
Stockings, worsted.....do	18	.....	.....	.....	.....	.....	18	.....	.....	.....	.....	.....	18
Stockings, felt.....do	.....	108	.....	.....	.....	.....	108	.....	.....	.....	36	36	72
Gloves, W. B., rights and lefts.number	103,619	374,825	.....	20,000	3,649	.....	502,093	6	20,000	.....	350,524	370,530	131,563
Mittens, woolen.....pairs	3,957	5,040	.....	.....	805	.....	9,802	.....	.....	.....	8,106	8,106	1,696
Mittens, felt.....do	.....	36	.....	.....	.....	.....	36	.....	.....	.....	36	36	.....
Gauntlets, for.....do	11	7,378	.....	600	136	.....	8,125	.....	600	4	7,490	8,094	31
Facings, uniform coats.....sets	.....	.....	237	.....	.....	.....	237	.....	.....	.....	237	237	.....
Boots, brass-screwed.....pairs	10,520	.....	35,000	28,996	70	.....	74,586	5	27,338	10	25,670	53,023	21,563
Boots, felt.....do	2	1	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Shoes, brass-screwed.....do	35,696½	.....	30,000	22,181	28	.....	87,905½	.....	21,201	.....	36,680	57,881	30,024½
Shoes, sample.....do	.....	7	.....	.....	.....	.....	7	.....	.....	7	.....	7	.....
Overshoes, buffalo.....pairs	51	.....	.....	.....	.....	.....	51	.....	.....	.....	.....	.....	51
Overshoes, arctic.....do	2,438	8,610	.....	1,300	117	.....	12,465	1	1,300	.....	6,670	7,971	4,494
Gaiters, buck, arctic.....do	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Snow excluders.....do	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1

Protectors, foot and leg.....do....	2						2						2
Blankets, woolen .....number..	755	28, 076					28, 831	19		12	26, 669	26, 700	2, 131
Blankets, rubber.....do....	130, 315				392	1	130, 708	51, 750		56	716	52, 520	78, 188
Ponchos, rubber .....do	95, 303				124	131	95, 558	30, 553		6	457	31, 016	64, 542
Chevrons, N. C. S. and first sergeants', pairs	1, 961½		1, 058		45		3, 064½			48	1, 649	1, 697	1, 367½
Chevrons, quartermaster sergeants', pairs.	38						38			2		2	36
Chevrons, regimental color sergeants', pairs			16				16			8		8	8
Chevrons, sergeants'..... pairs....	3, 470		4, 406		72		7, 948½			15	5, 383	5, 398	2, 550
Chevrons, corporals' .....do	4, 126		3, 881		67		8, 074	8		15	5, 437	5, 460	2, 614
Chevrons, farriers and pioneers'..do....	247½		243				490½			14	160	174	316½
Chevrons, service .....do....	1, 303		22, 601		123		24, 027			18	22, 441	22, 459	1, 568
Chevrons, war .....do....	2, 722		8, 453		262		11, 437			18	10, 283	10, 301	1, 136
Chevrons, campaign.....do....			20, 119				20, 119			18	19, 152	19, 170	949
Signal Corps devices.....number..	201		128				329			4	304	308	21
Trowsers stripes, N. C. S .....pairs..	44		623		10		677				632	632	45
Trowsers stripes, sergeants'.....do....	140		8, 851½		36		9, 027½	9			8, 844½	8, 853½	174
Trowsers stripes, corporals'.....do....	200		8, 549		41		8, 790	9			8, 643	8, 652	138
Bunks, iron .....number..	717			100	1, 216		2, 033	37	100		1, 422	1, 559	474
Bunk-slats .....sets..	493	1174	354	66		2	2, 069				1, 943	1, 943	146
Bunk-studs, plain.....number..					1, 275		1, 275			1, 275		1, 275	
Bunk-studs with nuts.....do....					1, 242		1, 242			1, 242		1, 242	
Bunk-stud rivets.....do....					2, 525		2, 525			2, 525		2, 525	
Bed sacks, single and double .....do....	12, 155		14, 517		120		26, 792	1, 045			12, 187	13, 232	13, 560
Pillow-sacks .....do....	24, 589		30		132		24, 751				1, 667	1, 667	23, 084
Mosquito bars, single and double do	7, 282				158		7, 420	4			3, 251	3, 255	4, 165
Mosquito head-nets .....do....		2, 074					2, 074				2, 074	2, 074	
Pots, iron .....do....	452				4		456				43	43	413
Kettles, camp.....do....	54, 598				28		54, 626	909		5	2, 970	3, 884	50, 742
Pans, mess.....do....	298, 344				25		298, 369	535			626	1, 161	297, 208
Axes.....do....	583	6, 142			15		6, 740	3			5, 827	5, 830	910
Ax-helves.....do....	292	18, 002			51		18, 345			2	16, 270	16, 272	2, 073
Ax-slings .....do....	21, 148				10		21, 158				32	32	21, 126
Hatchets.....do....	54, 365	4		300	15		54, 684	3	300		540	843	53, 841
Hatchet-helves .....do....	45, 471	2		1, 300	9		46, 782		1, 300	10	1, 034	2, 344	44, 438
Hatchet-slings .....do....	18, 679				10		18, 689				31	31	18, 658
Spades .....do....	34, 976				14		34, 990	4, 849			495	5, 344	29, 646
Spade-helves .....do....	11	26					37				26	26	11
Spade-slings .....do....	680				6		686				18	18	668
Shovels, short-handled .....do....	13, 025	2, 025			14		15, 064	2, 392			2, 484	4, 876	10, 188
Shovels, long-handled .....do....	4	3, 000					3, 004				942	942	2, 062
Shovel-handles.....do....		94					94				94	94	
Pick-axes .....do....	50, 331				25		50, 356	2			486	488	49, 868
Pickax-helves.....do....	32, 377			1, 600	10		33, 987	3, 314	1, 600	50	1, 834	6, 798	27, 189
Pickax-slings .....do....	488				6		494				66	66	428
Drums, complete.....do....	2, 933				2		2, 935	1		1	8	10	2, 925
Drum-heads, batter.....do....	128	1, 000			17		1, 145		50		254	304	841
Drum-heads, snare .....do....	2, 816				20		2, 836				141	141	2, 695
Drum-slings.....do....	5, 023	8			254		5, 285	17		6	14	37	5, 248
Drum-hooks.....sets..							4			4		4	

A.—*Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department, June 30, 1882, &c.*—Continued.

Articles.	On hand June 30, 1882.	Purchased.	Manufactured.	Received from general depots.	Received from posts and distributing depots.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1883.
Drum-hooks.....pairs	.....	800	.....	.....	.....	.....	800	.....	.....	.....	.....	.....	800
Drum-sticks.....do	11,515	.....	.....	.....	184	.....	11,699	.....	.....	1	28	29	11,670
Drum-stick carriages.....number	9,904	.....	.....	.....	178	.....	10,082	.....	.....	.....	1	1	10,081
Drum-cords.....do	527	.....	.....	.....	215	.....	742	.....	.....	.....	40	40	702
Drum-snares.....sets	2,550	.....	.....	.....	334	.....	2,884	.....	.....	2	13	15	2,869
Drum-cases.....number	2,836	.....	.....	.....	3	.....	2,839	.....	.....	1	8	9	2,830
Drums, Prussian pattern.....do	.....	97	.....	.....	.....	.....	97	.....	.....	4	16	20	77
Trumpets.....do	284	350	.....	.....	.....	.....	634	.....	.....	.....	561	561	73
Trumpet, extra mouth-piece.....do	237	.....	.....	.....	47	.....	284	.....	.....	.....	1	1	283
Trumpet-crooks.....do	510	.....	.....	.....	.....	.....	510	.....	50	.....	241	291	21
Bugles, with extra mouth-piece.....do	70	.....	.....	.....	6	.....	76	1	.....	.....	.....	1	75
Extra mouth-pieces, bugles.....do	36	.....	.....	.....	.....	.....	36	.....	.....	.....	.....	.....	36
Cords and tassels, trumpets and bugles.....number	10,039	.....	.....	.....	4	.....	10,043	16	1	.....	309	326	9,717
Fifes.....do	8,341	.....	.....	.....	121	.....	8,462	4	.....	.....	21	25	8,437
Books, company clothing account, number	7,781	.....	.....	.....	21	.....	7,802	2	.....	3	38	43	7,759
Books, company descriptive. number	8,557	.....	.....	.....	18	.....	8,575	1	.....	16	64	81	8,494
Books, company inspection.....do	45	.....	.....	.....	.....	.....	45	.....	.....	.....	.....	.....	45
Books, company letter.....do	.....	.....	.....	150	.....	500	650	.....	150	.....	124	274	376
Books, company morning report.do	9,145	.....	.....	.....	16	.....	9,161	4	.....	1	63	68	9,093
Books, company order.....do	6,934	.....	.....	8	.....	.....	6,942	1	.....	4	89	94	6,848
Books, post-guard report.....do	6	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	6
Books, post letter.....do	4,111	.....	.....	.....	11	.....	4,122	1	.....	1	45	47	4,075
Books, post morning report.....do	21	.....	.....	.....	.....	.....	21	.....	.....	.....	.....	21	.....
Books, post order.....do	4,107	.....	.....	.....	15	.....	4,122	.....	.....	1	29	30	4,092
Books, regimental descriptive...do	1,905	.....	.....	.....	1	.....	1,906	.....	.....	1	10	11	1,895
Books, regimental general order.do	1,150	.....	.....	.....	.....	.....	1,150	.....	.....	509	6	515	635
Books, regimental index.....do	1,952	.....	.....	.....	2	.....	1,954	3	.....	2	23	28	1,926
Books, regimental letter.....do	1,161	.....	.....	20	.....	.....	1,181	3	20	2	56	81	1,000
Books, regimental orders.....do	1,792	.....	.....	.....	1	.....	1,793	1	.....	5	3	9	1,784
Books, brigade letter.....do	99	.....	.....	.....	.....	.....	99	.....	.....	.....	9	9	90
Books, consolidated morning report, number	3	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Books, indorsement and memorandum.....number	29	.....	.....	.....	.....	.....	29	.....	.....	.....	2	2	27
Books, inspection.....do	29	.....	.....	.....	.....	.....	29	.....	.....	.....	.....	.....	29
Books, order.....do	24	.....	.....	.....	.....	.....	24	.....	.....	.....	2	2	22
Tents, conical wall.....do	50	.....	13	.....	.....	.....	63	.....	27	.....	34	61	2
Tents, Sibley.....do	77	.....	36	52	.....	2	167	.....	26	.....	57	83	84

Tents, hospital	do	460		2	724	122		1,308	1	274	14	110	399	909
Tents, wall	do	95		866	110	36		1,107		110	3	827	940	167
Tents, common	do	764		599		432		1,795				1,460	1,460	335
Tents, shelter, halves	do	689,326			5,000			694,326	1,304	5,000	71,620	13,357	91,281	603,045
Tents, pyramid	do	4						4						4
Tent-flies, hospital	do	106		424	100	1		631		100	11	389	500	131
Tent-flies, wall	do	47		896	125	36		1,104		125	4	854	983	121
Tents, wall, French	do	2						2						2
Tent-flies, wall, French	do	2						2						2
Tents, common, French	do	2						2						2
Tents, pattern	do	3						3						3
Tents, pattern, with tripod and poles	number	1						1						1
Tent, pattern flies	do	2						2						2
Tent, marquee	do	2						2						2
Tent, wall, conical model	do	1						1						1
Tent, Sibley, stoves	do	37	620			12		669				514	514	155
Tent, Sibley, stove-pipe joints	do	533	5,323			48	26	5,930				5,532	5,532	398
Tent, Sibley, stove-pipe elbows	do		25					25				25	25	
Tent, Sibley, stove-pipe flanges	do	77						77						77
Tent, Sibley, chains	sets	3,842						3,842		3,804			3,804	38
Tent, Sibley, poles	number	242			52			294		52		88	140	154
Tent, Sibley, rings	do	8,922						8,922		8,878			8,878	44
Tent, Sibley, tripods	do	2,290			1,672			3,962		1,672		156	1,828	2,134
Tent, shelter, poles, upright	do	18,894				100		18,994			12	60	72	18,922
Tent, hospital, poles, ridge	do	1,920			161	135		2,216	1	161	23	85	270	1,946
Tent, hospital, poles, upright	do	3,096			758	267		4,121	213	308	49	170	740	3,381
Tents, wall, poles, ridge	do	865			75	9	139	1,088	31	75		239	345	743
Tent, wall, poles, upright	do	1,332			150	18	355	1,855	928	150		408	1,481	374
Tent, bell, poles	sets	10			2			12	2	2	2		6	6
Tent, common, poles, ridge	number	1,880				26		1,906	103			874	977	929
Tent, common, poles, upright	do	3,841				52		3,893	512			1,961	2,473	1,420
Tents, bell	do	11			2			13		2	3		5	8
Tent-pins, iron	do		1,250					1,250				1,250	1,250	
Tent-pins, assorted	do	253,974	20,558		14,748	5,419		294,699	3,377	2,148	4,309	101,941	111,775	182,924
Tent-guys	do	2,303					100	2,403				100	100	2,303
Tent-ropes	sets	743						743				3	3	740
Tent pyramid-poles	do	4						4						4
Flags, post	number	261			3	13		277	5		4	158	167	110
Flags, garrison	do	239						239	2		1	6	9	230
Flags, storm and recruiting	do	214	150		10	10		384	2	10	4	284	300	84
Flags, recruiting	do	165						165				3	3	162
Flags, designating	do	351						351						351
Flags, post, field and hospital	do	678						678						678
Flags, general hospital	do	115						115						115
Flags, national	do	354			2			356	26	2		35	63	293
Guidons	do	474	150		40			664	17	40		180	237	427
Guidon-cases	do	158	150		40			348		40		143	183	165
Guidons, ambulance	do	2,417						2,417	4				4	2,413
Standards	do	694						694	6			33	39	655
Streamers and pennant	do			26				26				26	26	
Union jack	do	1						1				1	1	

A.—*Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department, June 30, 1882, &c.*—Continued.

Articles.	On hand June 30, 1882.	Purchased.	Manufactured.	Received from general depots.	Received from posts and distributing depots.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1883.
Colors, regimental ..... number..	581	.....	.....	2	.....	.....	583	6	2	.....	46	54	529
Colors, camp ..... do....	2,600	.....	.....	.....	.....	.....	2,600	27	.....	.....	86	113	2,487
Colors, cords and tassels ..... do....	746	.....	.....	.....	19	1	766	.....	.....	.....	26	26	740
Color-cases ..... do....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	1	.....
Color slings ..... do....	1,164	.....	.....	.....	.....	.....	1,164	.....	.....	.....	.....	.....	1,164
Color-belts ..... do....	669	.....	.....	.....	.....	.....	669	.....	.....	.....	.....	.....	669
Color belts and slings ..... do....	262	.....	.....	.....	.....	.....	262	1	.....	.....	3	4	258
Color-staffs ..... do....	2,218	.....	.....	.....	.....	1	2,219	.....	.....	150	128	278	1,941
Color-fringes ..... do....	3	.....	.....	.....	.....	.....	3	.....	.....	.....	2	2	1
Flag-staffs, ambulance ..... do....	1,801	.....	.....	.....	.....	.....	1,801	.....	.....	.....	.....	.....	1,801
Flag-staffs, hospital and guidon.. do	419	.....	.....	.....	.....	.....	419	.....	.....	.....	1	1	418
Halliards, garrison and post ... do....	592	.....	.....	1	13	1	607	6	.....	5	160	171	436
Halliards, storm and recruiting flag, number.	1,892	.....	.....	500	.....	.....	2,392	1	500	.....	23	528	1,868
Stencil-plates ..... sets..	854½	.....	.....	.....	1	4	859½	.....	.....	20	112½	132½	727
Brooms ..... number..	3,644	36	30,000	16,300	.....	12	49,992	.....	15,100	246	28,828	44,174	5,818
Scrubbing-brushes ..... do....	3,281	10,008	.....	2,046	.....	.....	15,335	.....	2,046	37	12,169	14,252	1,083
Scrubbing-brush handles ..... do	548	.....	.....	.....	.....	.....	548	.....	.....	.....	.....	.....	548
Alphabets, 1-inch ..... do....	2	.....	.....	.....	.....	20	22	.....	.....	.....	.....	.....	22
Alphabets, ¾-inch ..... do....	3	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Alphabets, ½-inch ..... do	1	.....	.....	.....	.....	20	21	.....	.....	.....	2	2	19
Numbers, 1-inch ..... do....	2	.....	.....	.....	.....	20	22	.....	.....	.....	.....	.....	22
Numbers, ¾-inch ..... do....	6	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	6
Numbers, ½-inch ..... do....	1	.....	.....	.....	.....	20	21	.....	.....	.....	2	2	19
Barrack chairs ..... do....	451	.....	4,000	300	.....	.....	4,751	1	300	.....	4,180	4,481	270
Card-holders ..... do	827	10,000	.....	.....	68	.....	10,895	.....	.....	.....	538	538	10,357
Shoe-files ..... do	149	51	.....	.....	1	.....	201	.....	50	.....	123	173	28
Tents without wall ..... do....	70	.....	.....	.....	.....	.....	70	.....	.....	.....	12	12	58
Acid, oxalic ..... pounds..	.....	95	.....	.....	.....	.....	95	.....	.....	89	.....	89	6
Awls, assorted ..... dozens..	49	36	.....	.....	.....	.....	85	.....	.....	.....	50	50	35
Awls, wax-thread ..... do	.....	6	.....	.....	.....	.....	6	.....	.....	6	.....	6	.....
Awls, pegging ..... do....	13	.....	.....	.....	.....	.....	13	.....	.....	11	.....	11	2
Awls, pricking ..... do....	.....	300	.....	.....	.....	.....	300	.....	.....	300	.....	300	.....
Awls, sewing ..... do....	.....	24	.....	.....	.....	.....	24	.....	.....	22	.....	22	2
Awl-hafts, assorted ..... do	23	48	.....	.....	.....	.....	71	.....	.....	.....	36	36	35
Baling presses ..... number..	17	.....	.....	.....	.....	.....	17	.....	.....	.....	.....	.....	17
Band-saws ..... do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Barrack chairs, sets of rods ..... do....	.....	92	200	.....	.....	.....	292	.....	.....	.....	292	292	.....
Barrack chairs, extra parts ..... do....	.....	.....	585	.....	.....	.....	585	.....	.....	.....	585	585	.....
Baskets ..... do....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2

Bees wax ..... pounds..	43¾	312	.....	.....	.....	.....	355¾	.....	.....	276	5	281	74¾
Blades, cutting-machine, cloth .number..	30	.....	.....	.....	.....	.....	30	.....	.....	.....	.....	.....	30
Board, pattern ..... pounds..	.....	25	.....	.....	.....	.....	25	.....	.....	25	.....	25	.....
Books, text ..... number..	20	.....	.....	.....	.....	.....	20	.....	.....	.....	.....	.....	20
Books, scientific ..... do...	5	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	5
Boot-crimps ..... do....	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....
Boot-crimping boards ..... do....	6	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	6
Boot-crimping forms ..... pairs..	288	300	.....	.....	.....	.....	588	.....	.....	.....	105	105	483
Boot-seam rubbers ..... number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Boot-trees ..... pairs..	30	.....	.....	.....	.....	.....	30	.....	.....	.....	.....	.....	30
Boot-trees, automatic, with table, number	7	5	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	12
Boxes, patent ..... number..	9	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	9
Braid, worsted ..... yards..	8, 674½	.....	.....	.....	.....	.....	8, 674½	.....	.....	817½	101½	919	7, 755½
Broom-corn ..... pounds..	.....	74, 400	.....	.....	.....	.....	74, 400	.....	.....	73, 075	.....	73, 075	1, 325
Broom-handles ..... number..	.....	30, 000	.....	.....	.....	.....	30, 000	.....	.....	30, 000	.....	30, 000	.....
Broom-twine ..... pounds..	108	450	.....	.....	.....	.....	558	.....	.....	558	.....	558	.....
Broom-wire ..... do....	130	1, 400	.....	.....	.....	.....	1, 530	.....	.....	1, 470	.....	1, 470	60
Brushes, button ..... number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Brushes, cloth ..... do....	12	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	12
Brushes, ink, flat ..... do....	.....	36	.....	.....	.....	.....	36	.....	.....	36	.....	36	.....
Brushes, ink, round ..... do....	5	96	.....	.....	.....	.....	101	.....	.....	96	.....	96	5
Brushes, paint ..... do....	.....	4	.....	.....	.....	.....	4	.....	.....	.....	.....	4	.....
Brushes, round, machine ..... do....	.....	2	.....	.....	.....	.....	2	.....	.....	2	.....	2	.....
Buckles, gilt ..... do....	54, 274	77, 371	.....	5, 000	.....	500	137, 145	40, 608	5, 000	75, 373	.....	120, 961	16, 184
Bunting ..... yards..	211	.....	.....	.....	.....	.....	211	.....	.....	211	.....	211	.....
Buffer-steels ..... number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Buttons, coat ..... do....	384, 901	305, 280	.....	219, 600	.....	1, 922	911, 703	.....	219, 600	364, 971	.....	584, 571	327, 132
Buttons, metallic ..... pounds..	2, 846	.....	.....	.....	.....	.....	2, 846	2, 584	.....	.....	.....	2, 584	262
Buttons, rubber ..... number..	56, 398	290, 364	.....	224, 640	.....	.....	571, 402	.....	224, 640	292, 557	204	517, 401	54, 001
Buttons, shirt and fly ..... do....	611, 170	849, 600	.....	255, 600	.....	.....	1, 716, 370	84	255, 600	727, 382	.....	983, 066	733, 304
Buttons, suspender ..... do....	893, 296	70, 848	.....	304, 128	.....	143, 267	1, 411, 539	46	304, 128	801, 570	.....	1, 105, 744	305, 795
Buttons, tent ..... do....	9, 825	.....	.....	.....	.....	200	10, 025	.....	.....	.....	200	200	9, 825
Buttons, vest ..... do	3, 891, 909	.....	.....	37, 440	.....	140, 434	4, 069, 783	.....	37, 440	207, 499	.....	244, 939	3, 824, 844
Calico ..... yards..	209½	.....	.....	.....	.....	.....	209½	209½	.....	.....	.....	209½	.....
Cases, glass and rosewood .... number..	3	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Cast-offs ..... do....	.....	120	.....	.....	.....	.....	120	.....	.....	120	.....	120	.....
Cambric ..... yards..	41	.....	.....	.....	.....	.....	41	.....	.....	.....	.....	.....	41
Chas-skiving machine ..... number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Chains, tent ..... sets	.....	25	.....	3, 804	.....	23	3, 852	.....	.....	48	107	155	3, 697
Chalk ..... boxes..	4	20	.....	.....	.....	.....	24	.....	.....	14	.....	14	10
Clamps ..... number..	3	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Clamps, band-knife machine ..... do....	24	.....	.....	.....	.....	.....	24	.....	.....	.....	.....	.....	24
Cloth-baling ..... yards..	330½	2, 191½	.....	.....	.....	.....	2, 522	.....	.....	2, 522	.....	2, 522	.....
Cloth-beams ..... number..	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Cloth, D. B., uniform, 6-4 ..... yards..	7, 467 3/16	71½	.....	.....	10	.....	7, 548 11/16	24⅛	2, 016⅜	2, 966 3/16	1, 742	6, 749 7/16	799⅛
Cloth, S. B, 6-4 ..... do....	1	.....	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....
Cloth, facing ..... do	135 39/100	2, 160 7/8	.....	228½	1 24/100	514 4/100	4, 259 339/400	1 7/8	228½	3, 702 1/8	92 1/8	4, 026 2/4	233 31/40
Cloth, Italian ..... do....	982½	1, 278½	.....	.....	.....	.....	2, 261 1/8	2⅛	.....	686½	.....	688⅛	1, 572 17/40
Cloth, blanket ..... do....	.....	513½	.....	.....	.....	.....	513½	.....	.....	509½	.....	509½	4⅛
Cloth-holders ..... number..	4	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Cloth, napmeter ..... do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1

A.—*Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department, June 30, 1882, &c.*—Continued.

Articles.	On hand June 30, 1882.	Purchased.	Manufactured.	Received from general depots.	Received from posts and distributing depots.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1883.
Cloth-weights ..... number	6	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	6
Coat-facings ..... sets	79	.....	.....	.....	.....	.....	79	.....	.....	.....	.....	.....	79
Cord, tent ..... feet	646, 562	.....	.....	.....	.....	.....	646, 562	.....	.....	26, 910	.....	26, 910	619, 652
Cord, worsted ..... yards	51, 253⅝	201, 526	.....	145, 000	.....	1, 135	398, 914⅝	.....	145, 000	190, 703 9/16	531	336, 234 9/16	62, 680 1/16
Covers, felt ..... number	.....	12	.....	.....	.....	.....	12	.....	.....	12	.....	12	.....
Crank, trimming and gear ..... do	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....
Crimping-brake ..... do	5	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	5
Crimp-screws ..... do	100	.....	.....	.....	.....	.....	100	.....	.....	.....	.....	.....	100
Crispin hammers ..... do	178	12	.....	.....	.....	.....	190	.....	.....	.....	23	23	167
Cressers or strip sets ..... do	24	.....	.....	.....	.....	.....	24	.....	.....	.....	8	8	16
Cut nails ..... pounds	.....	200	.....	.....	.....	.....	200	.....	.....	200	.....	200	.....
Cutters ..... number	12	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	12
Dies, assorted ..... do	94	7	.....	.....	.....	.....	101	.....	.....	.....	.....	.....	101
Dies, counter ..... do	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Dies, heel ..... do	.....	3	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Dressing, shoe ..... gallons	20	350	.....	.....	.....	.....	370	.....	.....	304	.....	304	66
Drilling, 3-4 ..... yards	45, 897½	.....	.....	.....	.....	.....	45, 897½	.....	.....	.....	408½	408½	45, 489
Duck, cotton ..... do	16, 308	127, 217 7/16	.....	.....	.....	.....	143, 525 7/16	.....	.....	121, 837	1, 266	123, 103	20, 422 7/16
Duck, blue ..... do	577	.....	.....	.....	.....	.....	577	.....	.....	.....	.....	.....	577
Duck, brown ..... do	1, 062	.....	.....	.....	.....	.....	1, 062	.....	.....	1, 019½	.....	1, 019½	42½
Edge-planes with pressers ..... number	108	.....	.....	.....	.....	.....	108	.....	.....	.....	72	72	36
Edge-planes without pressers ..... number	31	.....	.....	.....	.....	.....	31	.....	.....	.....	31	31	.....
Edge-pressers ..... do	10	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	10
Edge-shaves ..... do	12	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	12
Emery powder ..... pounds	.....	15	.....	.....	.....	.....	15	.....	.....	15	.....	15	.....
Emery straps ..... number	.....	24	.....	.....	.....	.....	24	.....	.....	24	.....	24	.....
Epsom salts ..... pounds	.....	80	.....	.....	.....	.....	80	.....	.....	80	.....	80	.....
Eyes ..... number	160, 850	17, 136	.....	3, 024	.....	500	181, 510	.....	3, 024	28, 302	.....	31, 326	150, 184
Flannel, Canton ..... yards	414	201, 279½	.....	119, 003½	.....	6, 880½	327, 577½	53	118, 950	199, 095½	3, 827	321, 925½	5, 652½
Flannel, cape-lining ..... do	876½	18, 585	.....	369½	25½	300	20, 156½	37½	369½	18, 454½	563½	19, 425½	731
Flannel, D. B., 6-4 ..... do	22, 124½	134, 479	.....	26, 048½	.....	.....	182, 652½	21½	86, 376½	51, 548½	2, 994½	140, 940½	41, 711½
Flannel, D. B., 3-4 ..... do	1, 961½	.....	.....	.....	.....	.....	1, 961½	.....	.....	1, 869½	.....	1, 869½	91½
Flannel shirting, gray, light ..... do	45, 713	.....	.....	.....	.....	.....	45, 713	.....	10, 000½	32, 643½	20	42, 664	3, 049
Flannel shirting, gray, heavy ..... do	14, 967	34	.....	.....	.....	.....	15, 001	10	.....	8, 811	810	9, 631	5, 370
Flannel shirting, D. B., 6-4 ..... do	12, 357½	.....	.....	60, 327½	.....	10	72, 695½	.....	.....	70, 507½	452	70, 959½	1, 736
Flannel, gray, twilled ..... do	2, 575	.....	.....	10, 000½	25	.....	12, 600½	.....	.....	10, 375½	.....	10, 375½	2, 225
Flannel, red ..... do	9	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	9
Flat-irons ..... number	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Figures, steel ..... do	2	1	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Files, assorted ..... do	102	.....	.....	.....	.....	.....	102	.....	.....	.....	42	42	60

Files for heel-fitting machine	do	1	2					3					3
Files, shoe	do	9						9			6	6	3
French set-wheels	do	3						3					3
Frictions	do		4					4		4		4	
Goose-irons	do	3						3					3
Goose-iron stands	do	4						4					4
Grommets, brass	do	1,752	13,320					15,072		13,176		13,176	1,896
Gum camphor	pounds		45					45		45		45	
Gum-tragacanth	do	20	70					90		85		85	5
Glue	do		200					200		200		200	
Heel-burnishers	number	15						15			1	1	14
Heel-shaves	do	57	144					201			174	174	27
Hooks	do	168,050	17,136		3,024		500	188,710		3,024	28,302	31,326	157,384
Ink, burnishing	gallons	50	180					230			210	210	20
Ink, indelible	quarts		8					8			4	4	4
Iron, sheet	pounds		132					132				132	
Iron, forepart	number	6						6					6
Iron, lasts	do	12						12					12
Iron, nuts	pounds		525					525			525	525	
Iron, round	do		8,000					8,000			8,000	8,000	
Iron shank	number	3						3					3
Jack, heeling	do	3						3					3
Jacks, boot, crispin	do	5	12					17					17
Jacks, shoe, crispin	do	8						8					8
Jacks, ox-bow	do	3						3					3
Jeans, colored	yards	8,265½			4,610			12,875½		4,610	5,165½	9,775½	3,100½
Jeans, corset	do	609½						609½	8		77½	85½	524
Kersey, sky blue, 6-4	yards	5,600½	182,768½					188,368½	32½		152,088½	1,573½	153,694½	34,673½
Knives, guard	number	330						330				152	152	178
Knives, shoe	do	213						213				210	210	3
Knives, skiver, large	do	108						108				84	84	24
Knives, skiver, small	do	243						243				96	96	147
Knives, cutting	do	84						84				34	34	50
Knives, sharp-point Harrington's	do	31						31				12	12	19
Knives, assorted	do	22						22			12		12	10
Knives, band	do	6						6						6
Knives, breasting	do	66	36					102				78	78	24
Knives, for machine	do		48					48			48		48	
Knives, ripping	do	1						1						1
Knife-blocks	do		4					4			4		4	
Knife-carriages turn-table	do		1					1			1		1	
Knife-guard slides	do		2					2			2		2	
Labels	do		2,500					2,500			2,500		2,500	
Lace	yards	11						11						11
Lamps, kit	number	15						15				8	8	7
Lamps, microscope	do	1						1						1
Lasts	pairs	126	50					176				98	98	78
Lasts, calf-boot	do	1						1						1
Last-hooks	number	2						2						2
Lathe, complete	do	1						1						1
Lay figures	do	33						33						33
Leather, counter	pounds	2,008	6,000					8,008			5,908		5,908	2,100

A.—*Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department, June 30, 1882, &c.*—Continued.

Articles.	On hand June 30, 1882.	Purchased.	Manufactured.	Received from general depots.	Received from posts and distributing depots.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1883.
Leather, russet.....pounds..	.....	36	.....	.....	.....	.....	36	.....	.....	36	.....	36	.....
Leather, scrap, upper.....do....	12,421	.....	.....	.....	.....	33,084	45,505	40,065	.....	.....	.....	40,065	5,440
Leather, scrap, sole.....do....	3,111	.....	.....	.....	.....	14,851	17,962	15,339	.....	.....	.....	15,339	2,623
Leather, sole.....do....	2,000	171,000	.....	.....	.....	.....	173,000	.....	.....	170,672	.....	170,672	2,328
Leather, wax, upper.....do....	.....	358,000	.....	.....	.....	.....	358,000	.....	.....	356,515	.....	356,515	1,485
Linen, brown.....yards..	441½	.....	.....	.....	.....	.....	441½	.....	.....	.....	.....	.....	441½
Line, tent.....pounds..	226 7/16	4,175	.....	20,000	.....	101 1/16	24,503	.....	.....	5,645 8/16	100	5,745 8/16	18,757 7/16
Lumber.....feet..	.....	19,203	.....	.....	276	.....	19,479	.....	.....	19,479	.....	19,479	.....
Lumber, oak.....do....	.....	31,000	.....	.....	.....	.....	31,000	.....	.....	31,000	.....	31,000	.....
Lumber, poplar.....do....	.....	21,000	.....	.....	.....	.....	21,000	.....	.....	7,000	.....	7,000	14,000
Machines, band-knife.....number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Machines, burnishing.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, cloth-testing.....do....	5	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	5
Machines, counter-skiving.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, cloth-sponging.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, cloth-cutting.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, heel-filling.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, heel-breasting.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, leveling.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, measuring.....do....	4	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Machines, rolling.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, sand-paper.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, sewing.....do....	4	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Machines, shank.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, side-welt.....do....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Machines, sole-cutting.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, sole-molding.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, splitting.....do....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Machines, strap-hole cutting.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, stripping.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, steel-die.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Machines, turning.....do....	2	1	.....	.....	.....	.....	3	.....	.....	.....	1	1	2
Machines, tying.....do....	4	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Machines, wax-thread.....do....	6	1	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	7
Magnifying-glasses.....do....	3	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Microscopes.....do....	3	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Microscope, pocket.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Muslin, unbleached.....yards..	138,942¼	7,074½	.....	11,051½	.....	1,000	158,067¼	.....	11,051½	45,887 7/16	.....	56,938¾	101,128 7/16
Nails, American.....pounds..	385	3,350	.....	.....	.....	.....	3,735	.....	.....	2,940	.....	2,940	795
Nails, Swede.....do....	4,330	7,500	.....	.....	.....	.....	11,830	.....	.....	7,170	.....	7,170	4,660

Napmeter ..... number..	1						1						1
Needles, assorted ..... papers..	641						641						641
Needles, broom ..... number..		24					24			22		22	2
Needles, wax-thread ..... dozen..		120					120			116		116	4
Nippers, wire ..... number..	8						8				5	5	3
Oil-cups ..... do	108						108				49	49	59
Oil, fish ..... galls..		190½					190½			190½		190½	
Oil, linseed ..... do		6½					6½			6½		6½	
Oil, palm ..... do	5						5			5		5	
Oil, neatsfoot ..... do		29					29			27		27	2
Oil-stone and holder ..... do	1	12					13						13
Padding ..... yards..	35, 053⅛	7, 499		20, 320		1, 300	64, 172⅛	1 $\frac{12}{480}$	21, 120	31, 648⅛		52, 769$\frac{7}{8}$	11, 402$\frac{7}{16}$
Paint ..... pounds..		256½					256½			256½		256½	
Paper, patterns ..... do	40						40			40		40	
Paper, petroleum ..... do	8, 800	25, 319		2, 814	2, 544		39, 477		7, 794	24, 377	2, 480	34, 651	4, 826
Paper, sand ..... rolls..	107	100					207			207		207	
Paper, sand ..... quires..	550						550			474		474	76
Peg-floats, assorted ..... number..	3						3						3
Pressure gums ..... do		24					24			24		24	
Pincers, shank ..... do	145						145				49	49	96
Pincers, shoe, assorted ..... do	124						124				40	40	84
Pins ..... gross..		1, 440					1, 440			720		720	720
Plate-forms ..... number..		1					1			1		1	
Plates, throat, siding ..... do		12					12			12		12	
Plates, throat, round ..... do		6					6			6		6	
Pliers ..... do		9					9				1	1	8
Presser, feet, open ..... do		12					12			12		12	
Presser, feet, closed ..... do		12					12			12		12	
Punches, assorted ..... do	11						11						11
Rawhide seats ..... number..		3, 332					3, 332			3, 332		3, 332	
Rawhide thongs ..... do		100					100						100
Rawhide mallets ..... do	107						107				6	6	101
Rings, tent ..... do	259			8, 878			9, 137			48	108	156	8, 981
Rings, galvanized iron ..... pounds..	28$\frac{13}{16}$	470				7$\frac{1}{16}$	505⅞			505⅞		505⅞	
Rivets ..... do		10					10			10		10	
Rope, cotton ..... do	142	875					1, 017			792⅞		792⅞	224½
Rope, manila, ¼-inch ..... do	38, 724						38, 724		20, 000	262		20, 262	18, 462
Rope, tent ..... coil..		2					2			1	1	2	
Rope, wire ..... feet..		200					200			200		200	
Rulers ..... number..	1						1						1
Rye flour ..... pounds..		1, 500					1, 500			1, 500		1, 500	
Sad-irons ..... number..	9						9						9
Sand-hones ..... do	3						3						3
Saws for band-knife machine ..... do	1						1						1
Scales, silk ..... do	1						1						1
Scales and weights, chemists .... do	2						2						2
Scales, silk-trip ..... do	1						1						1
Scales, testing ..... do	1						1						1
Scissors ..... pairs..	1						1						1
Screws ..... gross..		84					84			22		22	62
Screw-clamps ..... number..	136						136						136
Screw-wire ..... pounds..	1, 000	7, 100					8, 100			7, 350		7, 350	750

A.—*Statement showing articles of clothing and equipage on hand at the issuing depots of the Quartermaster's Department, June 30, 1882, &c.*—Continued.

Articles.	On hand June 30, 1882.	Purchased.	Manufactured.	Received from general depots.	Received from posts and distributing depots.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1883.
Seals, No. 1.....number..	1	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Seals, C. and C.....do....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Sets, hooks and eyelet.....do....	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Sewing-bristles.....pounds..	.....	2	.....	.....	.....	.....	2	.....	.....	1¾	.....	1¾	¼
Sewing-cuffs.....number..	12	12	.....	.....	.....	.....	24	.....	.....	.....	.....	.....	24
Sewing-presses.....number..	4	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Shears.....pairs..	11	1	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	12
Sheepskin skivers.....feet..	4,077	44,000	.....	.....	.....	.....	48,077	.....	.....	40,780	.....	40,780	7,297
Shoe-pressers.....number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Shoe-pressers, slide.....do....	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....
Silesia.....yards..	18,809½	12,200	.....	12,617	.....	.....	43,626½	8	12,617	16,880 11/12	.....	29,505 11/12	14,120 11/12
Silk-measure.....number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Slick-bones.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Silk, sewing.....spools..	3,576 18/100	492	.....	.....	300	.....	4,368 18/100	7	.....	2,481	154	2,642	1,726 18/100
Silk, sewing.....ounces..	1,259 1/2	2,724	.....	.....	.....	.....	3,983 1/2	.....	.....	1,896 1/2	.....	1,896 1/2	2,087 1/2
Silk-twist.....do....	480 5/16	2,347	.....	700	195⅝	.....	3,722 11/16	.....	700	2,500 11/16	.....	3,200 11/16	522
Silk-tester.....number..	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Size-blocks.....do....	8	1	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	9
Skivers.....do....	7	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....	7
Slips, tent.....do....	38,149	3,500	.....	.....	6,032	.....	47,681	.....	.....	9,332	200	9,532	38,149
Socket-chains.....do....	.....	40	.....	.....	.....	2	42	.....	.....	.....	42	42	.....
Sockets, tent-pole.....do....	2	200	.....	.....	.....	.....	202	.....	.....	.....	120	120	82
Sponge.....pounds..	.....	10	.....	.....	.....	.....	10	.....	.....	10	.....	10	.....
Squares.....number..	4	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Stands, sewing-machine.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Steel stamps.....do....	4	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	4
Stay-binding.....dozen..	1,337	.....	.....	.....	.....	.....	1,337	.....	.....	32	.....	32	1,305
Sticks, long.....number..	1	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	.....
Sticks, pants.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Sticks, shoulder.....do....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Sticks, size and colt.....do....	6	36	.....	.....	.....	.....	42	.....	.....	.....	5	5	37
Sticks, yard.....do....	3	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	3
Straps, tent.....do....	.....	.....	.....	.....	.....	112	112	.....	.....	.....	112	112	.....
Tables, cutters.....number..	28	.....	.....	.....	.....	.....	28	.....	.....	.....	.....	.....	28
Tacks, lasting.....pounds..	200	2,200	.....	.....	.....	.....	2,400	.....	.....	2,000	.....	2,000	400
Tacks, lasting, steel.....gross..	.....	100	.....	.....	.....	.....	100	.....	.....	93	.....	93	7
Tacks, tinned.....papers..	.....	380	.....	.....	.....	.....	380	.....	.....	380	.....	380	.....
Tape.....yards..	116,0862	259,568	.....	188,220	.....	15,804	580,9182	95	183,220	309,9652	.....	493,2802	96,6384

Thread, machine	pounds	250	1,300					1,550			900		900	650
Thread, cotton, white	do	41						41	41				41	
Thread, cotton	spools	24,921	95,292		3,281		2,000	125,494	$\frac{3}{4}$	39,372	30,848$\frac{1}{2}$		70,221	55,273
Thread, linen	pounds	2,524$\frac{47}{100}$	3,019				300	5,843$\frac{47}{100}$	$\frac{47}{100}$	105	3,820$\frac{47}{100}$	17$\frac{1}{4}$	3,943$\frac{47}{100}$	1,900$\frac{47}{100}$
Thread, D. B. and W. B	do	1,572			105			1,677	$\frac{5}{64}$		211		211$\frac{5}{64}$	1,465$\frac{43}{64}$
Thread-guides	number		48					48			48		48	
Thimbles	do	1						1						1
Tickets, clothing	do		130,000					130,000			130,000		130,000	
Tongue crimping-boards	do	3						3						3
Tool, sash	do		4					4			4		4	
Turpentine	gallons		3$\frac{1}{2}$					3$\frac{1}{2}$				3$\frac{1}{2}$	3$\frac{1}{2}$	
Twine, cotton	pounds	6,744$\frac{1}{2}$	896		5,000			12,650$\frac{1}{2}$		5,000	1,041$\frac{1}{2}$	9	6,050$\frac{1}{2}$	6,600$\frac{1}{2}$
Twine, flax	do	171	100					271			86		86	185
Wadding	sheets	45,169						45,169	4,167		3,680		7,847	37,322
Washstand, camp	number	2						2						2
Wax, hard	balls		500					500			500		500	
Wax, liquid	gallons	26	60					86			72		72	14
Webbing, cotton	yards	108						108			108		108	
Welt-trimmers	number	142						142				50	50	92
Cuttings, all kinds	pounds	45,487					41,851	87,338	42,972				42,972	44,366
Cord	pieces		6					6			6		6	

Respectfully submitted.

JOHN F. RODGERS,
Captain and M. S. K., U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

B.—*Statement of amounts received and remitted by the Quartermaster's Department account of clothing and equipage during the fiscal year ending June* 30, 1883.

Appropriated by Congress	$1,400,000 00	Remitted for purchase and manufacture of clothing and equipage	$1,434,38
Deposited in Treasury to credit of the appropriation for clothing and equipage	69,261 96	Balance in Treasury June 30, 1883, and due on contracts not yet completed	34,87
Total	1,469,261 96	Total	1,469,26

Respectfully submitted.

JOHN F. RODGERS,
Captain and M. S. K., U. S.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

C.—*Statement showing remittances on account of clothing and equipage during the fi year ending June* 30, 1883.

Military Division of the Missouri	$5,706
Military Division of the Atlantic	579
Military Division of the Pacific	5,100
Depot at San Francisco, Cal	182,461
Depot at Philadelphia, Pa	1,005,115
Depot at Washington, D. C	63
Depot at New York City	125
Depot at Jeffersonville, Ind	73,532
Military Prison at Fort Leavenworth, Kans	161,687
Kennebec Arsenal, Augusta, Me	10
Total	1,434,383

Respectfully submitted.

JOHN F. RODGERS,
Captain and M. S. K., U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

D.—*Specifications for clothing, equipage, and materials for the manufacture of clothing equipage adopted, or amended, and distributed to officers of the Quartermaster's Depa ment during the fiscal year ending June* 30, 1883.

81½.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE

SPECIFICATIONS FOR SCRUBBING-BRUSHES.

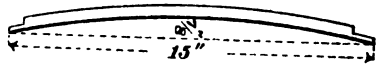
The block to be made of oak, ten (10) inches long, one-half (½) inch thick, one e miter-shaped.

The tail or straight end of the block, on the mitered edge, to have two (2) para rows of six (6) and seven (7) knots, respectively, one (1) inch long, slanting outwa the curved front end of the block, on the mitered edge, to have one (1) row of thirte (13) knots, one (1) inch long, slanting outward.

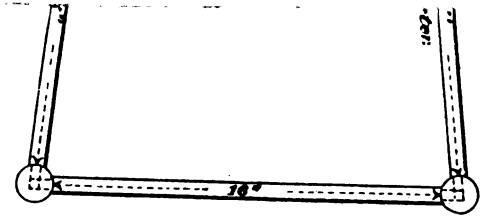
The body of the brush is to be five (5) inches long, and to contain four (4) rows eleven (11) knots each, and three (3) rows of twelve (12) knots each, cut three-fourt (¾) of an inch high from the wood.

The peak to be three (3) inches long, and to contain forty (40) knots, cut seve eighths (⅞) of an inch high above the wood. There are to be altogether one hundr and fifty (150) knots, drawn through the block with good, strong wire fastening Knots to be made of the best sharp, strong western bristles.

The back of the block must be covered with bass-wood, or other suitable wood, on eighth (⅛) of an inch thick, firmly nailed to it.



BACK-SLAT.



SEAT-FRAME.

Adopted September 29, 1882, in lieu of specifications adopted May 31, 1876, which are hereby cancelled.

RUFUS INGALLS,
Quartermaster-General, Bvt. Major-General, U. S. A.

82.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR TROUSERS.

Material.—Sky-blue kersey, Army standard.

Pattern and dimensions.

For foot troops.—To be cut according to standard sample, loose, without lining or plaits; waistband two inches wide, to button with one button in front; pockets in front, opening at top. Bottoms to spread well over shoe.

For mounted troops.—To be similar in pattern to those for foot-men, with the addition of a reinforce or saddle-piece of same material on seat and legs. Four buttons at bottom of each leg, two on each side, for straps.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
	Inches.	*Inches.*	*Inches.*	*Inches.*	*Inches.*
Length of side seam	41½	42½	43½	45½	47½
Length of leg	31½	32	33½	34½	36
Waist	32	34	36	37½	42
Bottoms	19	19½	20	20½	20½

Adopted October 9, 1882, in lieu of specifications adopted March 12, 1879, which are hereby cancelled.

RUFUS INGALLS,
Quartermaster-General, Bvt. Maj. General, U. S. A.

84.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR HELMETS FOR ALL TROOPS.

Material.—To be black; to be made of felt composed of one part each of "Russia" and best "coney," and one-half part of short-stock nutria or beaver; wine stiffened. Such other suitable material besides felt of the above composition as may, from time to time, be determined upon bids received in response to advertisement may be used if approved, in which case the character and quality of such material as shown in the sample submitted and accepted will govern the contract. Suitable holes must be made in the sides of the helmet for fastening on the side buttons, and in proper places on the helmet for all other trimmings.

Shape, &c.—To be in shape according to the standard sample. Black enameled leather band, seven-eighths (⅞) of an inch wide, to surround the helmet at the base of the crown, and to have an adjustable chin-strap, each part ten and one-half (10½) inches long, of the same material, with brass sliding-buckle, as on sample. The lower edge of helmet to be bound with black enameled leather, and the inside of visor all around to be lined with green morocco leather, pasted to the body with rubber cement. The sweat-leather to be of Belgian sheep-skin two (2) inches wide; inside the sweat-leather a band one (1) inch wide, of heavy enameled leather. All to be well stitched to place. A shell ventilator, according to pattern, to take the place of top-piece or spike, when desired.

Sizes.—To be of six (6) standard sizes, numbered from one (1) to six (6) inclusive, corresponding to the trade sizes, 6⅞ to 7⅝ inclusive.

The standard sample to be followed in all respects as to shape, quality of materials, workmanship, &c.

Adopted November 10, 1882, in lieu of specifications adopted May 6, 1882, which are hereby canceled.

RUFUS INGALLS,
Quartermaster-General, U. S. A.

NOTE.—*Ornaments and trimmings for foot troops.*—The top-piece to consist of a spike on a base of oak leaves, according to sample, and to be made to screw into the base of ventilator, as shown in sample. Eagle with shield and motto, and side buttons, according to pattern, for each arm of the service. All to be of yellow metal.

The number of regiment or device of corps to be in white metal (German silver), and be borne on the lower half of shield on eagle's breast, according to pattern.

For mounted troops.—The top ornament to consist of a horse-hair plume (color according to arm of service) and a yellow-metal plume-socket, as described in specifications, which rests upon the oak-leaf base. Eagle with shield and motto, and side buttons, according to arm of service. All to be of yellow metal.

The number of regiment or device of corps, in German silver, to be borne on shield, as described for foot troops.

85.

WAR DEPARTMENT,
QUARTERMASAER-GENERAL'S OFFICE.

SPECIFICATIONS FOR DRUM-SLINGS.

To be made of heavy two and one-eighth ($2\frac{1}{8}$) inch cotton cadet web, in *two pieces*, thirty-eight (38) and ten (10) inches long in the clear, held together by a leather frog, pear shaped, three and five-eighths ($3\frac{5}{8}$) inches long, two and five eighths ($2\frac{5}{8}$) inches wide at the broadest, and one and one half ($1\frac{1}{2}$) at the lowest part. The webbing to be let into the frog in such a way that the long part passes under the left arm and over the right shoulder, the short part over the right breast of wearer, and at such angle that, when worn, it hangs perfectly smooth.

An oblong tongueless buckle, two and five-eighths ($2\frac{5}{8}$) inches by one and a quarter ($1\frac{1}{4}$) inch, of strong brass, five-sixteenths ($\frac{5}{16}$) of an inch wide, with catch on inner side at the end of shorter part, and a slide of the same material seven-sixteenths ($\frac{7}{16}$) of an inch wide at the end of longer part, for the purpose of lengthening or shortening the sling. Buckle and slide both to be neatly fastened to webbing by three (3) rivets each.

A *triangle* of one-eighth ($\frac{1}{8}$) inch brass wire, to receive hook of drum at the lower end of frog, to which it is fastened by a leather loop let into the frog and securely stitched. Each side of triangle to be one (1) inch long.

Adopted January 15, 1883.

RUFUS INGALLS,
Quartermaster-General, Bvt. Major-General, U. S. A.

86.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR DRUMS, COMPLETE.

Pattern.—To be according to standard sample, and to weigh, complete, not to exceed four (4) pounds.

Wood shell.—Maple veneered, dark red, stained and varnished; sixteen (16) inches in diameter, and, including hoops, eight (8) inches high. Two (2) *hoops*, each one and one-quarter ($1\frac{1}{4}$) inches in width, stained and varnished black, with two (2) grooves in each.

There should be painted on the outside of the shell of each drum the escutcheon of the arms of the United States, and upon the field of the same the letters U. S. in gilt, seven-eighths ($\frac{7}{8}$) of an inch long; and the contractor's name, with date of contract, on the inside of shell. visible from the vent.

Two (2) calf-skin *heads*, one (1) batter, and one (1) snare. Eight (8) *snares* of eight (8) strands each. Snares attached to drum by a long adjustable *snare-screw* fastened to both hoops. Eight (8) nickel-plated rods with right and left screw-threads to brass polished hooks on each end.

Belt hooks of stout brass wire, fastened to two (2) of the brass-rod hooks. Two (2) nickel-plated *wrenches* to accompany each drum. One (1) brass folding *knee-rest*, with spring.

Adopted January 15, 1883.

RUFUS INGALLS,
Quartermaster-General, Bvt. Major-General, U. S. A.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR COTTON STOCKINGS.

Colors.—To be of three (3) colors, viz, gray mixed, brown mixed, and white (unbleached), and to be put up in dozens of one color.

Material.—The brown and gray mixed to be of good long-staple American cotton, free from impurities, of a grade not lower than "New Orleans middling," double carded; and the white to be of good long-staple American cotton, free from impurities.

Workmanship.—The brown and gray mixed to be "full regular," made according to the standard sample, with fashioned heels and toes; the yarn to be spun from two (2) rovings in the regular hosiery twist for cotton. The top to be ribbed to a depth of about four and a half (4½) inches, and to be joined to the leg without seam or linking, forming an integral part of the stocking; to be knitted from three (3) No. 14 yarns and have the upper edge welted. The leg and foot to be knitted of three (3) No. 13 yarns. The substance of heel to be increased by an additional yarn of No. 25. Length of leg from lower edge of ribbed top to be not less than seven and one-half (7½) inches. The white (unbleached) to be similar to the above, except that the yarn be spun from a single roving.

Sizes.—To be of five (5) sizes, viz, 9½-inch, 10-inch, 10½-inch, 11-inch, and 11½-inch. Each size to be put up separate, in the following proportions: Sixteen 9½, thirty-two 10, twenty-eight 10½, sixteen 11, eight 11½ to the one hundred pairs.

Weight.—To weigh not less than two (2) pounds to the dozen pairs.

Adopted February 23, 1883, in lieu of specifications adopted March 12, 1879 (No. 22), which are hereby canceled.

RUFUS INGALLS,
Quartermaster-General, Brevet Major-General, U. S. A.

88.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR GRAY BLOUSE LINING FLANNEL.

To be full twenty-seven (27) inches wide when finished. To have fifty-six (56) threads of chain and forty-eight (48) threads of filling to the inch (square).

The chain to be made of the best long-staple American cotton yarn, No. 40, doubled and twisted, dyed pure indigo blue, and to weigh one and three-quarter (1¾) ounce to the yard. The filling to be composed of good quality American fleece wool, at least one-quarter blood, and of the best long-staple American cotton, in the proportion of seventy-five (75) parts wool to twenty-five (25) parts cotton, and to be free from shoddy, flocks, or other impurities. To be dyed with indigo and logwood to color of filling of standard sample, and to weigh four and one-quarter (4¼) ounces to the yard. Weight to be not less than six (6) ounces to the linear yard.

The breaking strain to be not less than forty (40) pounds to one inch width of warp, and thirty-eight (38) pounds to one inch width of filling in the piece.

To be neither hot nor cold pressed. To be properly fulled, and of the shade of the standard sample.

Adopted March 19, 1883.

RUFUS INGALLS,
Quartermaster-General, Brt. Major-General, U. S. A.

89.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR DARK BLUE WOOL SHIRTING AND CAPE LINING FLANNEL.

To be fifty-four (54) inches, or ⅞ wide, and to be made of pure long-staple American fleece wool, not less than one-half blood, free from shoddy, flocks, or other impurities, and to weigh not less than ten (10) ounces to the linear yard.

To be twilled and the nap very slightly raised; to contain not less than fifty-six (56) threads of warp and forty-eight (48) threads of filling in each square inch, and to be capable of sustaining a strain of not less twenty-six (26) pounds to the inch in width of warp, and not less than twenty-two (22) pounds to the inch in width of filling, tested in the piece.

The colors to be dark-blue, green, gray, crimson, scarlet, orange, and yellow of the standard shades, and to be dyed with fast colors. The blue to be dyed in the wool with pure indigo.

Adopted March 15, 1883, in lieu of the specifications for dark-blue wool shirting flannel adopted February 9, 1881, and of the specifications for cape lining flannel adopted February 10, 1880, both of which are hereby canceled.

RUFUS INGALLS,
Quartermaster-General, Bvt. Maj. General, U. S. A.

90.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR DARK-BLUE INDIGO COAT CLOTH.

To be fifty-four (54) inches, or $\frac{4}{4}$ wide, and to be made of pure American fleece wool, not less than three-quarter to full blood, free from shoddy, flocks, or other impurities. To be twilled, and to be finished to the standard sample.

To contain not less than sixty-six (66) threads of warp and sixty (60) threads of filling in each square inch. To weigh not less than twenty (20) ounces to the linear yard. To be capable of sustaining a strain of fifty (50) pounds to the inch in width of warp and forty-two (42) pounds to the inch in width of filling.

The color to be same shade of dark blue as the standard sample, and to be dyed in the wool with pure indigo, and to have a yellow or white woolen list.

Adopted April 4, 1883, in lieu of specifications adopted May 31, 1876, which are hereby canceled.

ALEX. J. PERRY,
Acting Quartermaster-General, U. S. A.

91.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR OVERSHIRTS.

Materials.—Dark-blue wool flannel, Army standard, and hard-rubber buttons, 23 ligne.

Pattern.—To be according to sample, loose, with falling collar (without band), single plait two inches (2″) wide on front, and with cuffs. Two (2) outside "patch" breast pockets about seven inches (7″) deep by six inches (6″) wide, rounded at bottoms. The side seams open about nine inches (9″) from bottom, and secured at top of opening with a stay of white-cotton binding well stitched on the inside. Buttons and button-holes to be at each of the following places, viz: One (1) at the throat; two (2) on the front plait, equidistant between the throat and bottom of opening; one (1) at the center of the mouth of each pocket, and one (1) on each cuff, making seven (7) in all. Corners of cuffs and bottom of shirt to be rounded off.

Dimensions.—Depth of collar for average size about three and one-half inches ($3\frac{1}{2}$″) in front and two and three-quarters inches ($2\frac{3}{4}$″) behind; of cuff about two and one-half inches ($2\frac{1}{2}$″); of front plait about fourteen inches (14″). To be of four (4) sizes, measuring as follows:

	Length of shirt.	Length of sleeve.	Collar.	Cuff.
Size 1	30 inches	$32\frac{1}{2}$ inches	15 inches	$8\frac{1}{2}$ inches.
Size 2	31 inches	33 inches	$15\frac{1}{2}$ inches	9 inches.
Size 3	32 inches	34 inches	$16\frac{1}{2}$ inches	$9\frac{1}{2}$ inches.
Size 4	33 inches	35 inches	17 inches	10 inches.

Adopted April 12, 1883, in lieu of specifications (No. 79) adopted February 24, 1882, which are hereby canceled.

ALEX. J. PERRY,
Acting Quartermaster-General, U. S. A.

92.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR BLOUSES.

Material.—Dark-blue wool flannel, Army standard. Gray twilled mixed flannel lining for body, and unbleached muslin lining for sleeves.

Pattern.—To be a single-breasted sack coat, with falling collar, and having five (5) regulation buttons in front, from neck to waist, similar to standard sample.

Depth of collar two and a half (2½) to three (3) inches, according to size. Collar to be rounded at corners. Small regulation button on outer seam of cuff, one and three-quarters (1¾) inch from edge. Two inside breast-pockets. Canvas or vest padding in shoulders, breast, and collar.

	Breast measure.	Length.	Waist measure.	Collar measure.	Length of sleeve.
	Inches.	*Inches.*	*Inches.*	*Inches.*	*Inches.*
Size 1	34	29	32	15½	32
Size 2	36	29½	34	16	32½
Size 3	38	30	36	16½	33½
Size 4	40	31	38	17	34
Size 5	44	32½	42	18	35

Adopted May 19, 1883, in lieu of specifications (No. 13) approved March 12, 1879.

RUFUS INGALLS,
Quartermaster-General, Bvt. Maj. General, U. S. A.

93.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE.

SPECIFICATIONS FOR DRAWERS.

Material.—To be unbleached Canton flannel, Army standard.

Drawers to be made to conform to standard sample. Waistband two (2) inches wide at back, increasing to five (5) inches wide in front, as in standard, buttoning with two (2) buttons about two and one-half (2½) inches apart.

To have facings, or reinforcing pieces, each about two (2) inches wide, double stitched on as in standard, extending from point of waistband in front to within eight and one-half (8½) inches of opening at back of waist; this opening to be four (4) inches long, with four worked eyelet-holes, and lacing strings of three-quarter (¾) inch white cotton tape.

To have opening at bottom of each leg five (5) inches long, and bottom bands one (1) inch wide, with one (1) button-hole and two (2) buttons on each leg, one (1) inch apart.

The openings in back of waist and in legs to be neatly faced with Canton flannel about one (1) inch wide; all openings to be secured by button-hole stitch.

Dimensions of each size to be as follows:

	No. 1.	No. 2	No. 3.	No. 4.	No. 5.
	Inches.	*Inches.*	*Inches.*	*Inches.*	*Inches.*
Length of side seam	39	40½	41½	43	45
Length of leg seam	29	30	31	32	33
Waist	31	32	34	36	38

Adopted May 25, 1883, in lieu of specifications approved September 25, 1879 (No. 20), which are hereby canceled.

RUFUS INGALLS,
Quartermaster-General, Bvt. Major-General, U. S A.

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

4132 W——31

E.—*Statement showing articles of old-pattern clothing turned over to the National Home for Disabled Volunteers, under the act of March* 3, 1881, *during the fiscal year ending June* 30, 1883.

Depots from which issued.	Campaign hats.	Forage caps.	Overcoats, all kinds.	Uniform coats.	Uniform jackets.	Blouses and sack coats, all kinds.	Trousers, all kinds.	Boots, pairs.	Shoes, pairs.	Drawers.
Philadelphia, Pa	.....	.....	1,500	.....	.....	.....	.....	.....	.....	.....
Jeffersonville, Ind	3	12	473	67	.....	3,381	288	8	29	.....
Saint Louis, Mo	.....	25	279	19	678	633	774	55	696	.....
San Francisco, Cal	.....	966	3,273	4	5	610	690	.....	.....	167
Total	3	1,003	5,525	90	683	4,624	1,752	63	725	167

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington. D. C., September 17, 1883.

F.—*Statement showing articles of clothing and equipage issued by the Quartermaster's Department to the detachment of the Lady Franklin Bay Expedition during the fiscal year ending June* 30, 1883, *and money value of the property.*

Articles.	Quantity.	Price.	Amount.
Buffalo overcoats	38	$13 25	$503 50
Fur caps	24	1 12	26 88
Gauntlets, pairs	24	1 98	47 52
Arctic overshoes, do	24	2 72	65 28
Woolen blankets	150	3 79	568 50
Rubber blankets	28	1 13	31 64
Dark-blue shirts	175	2 67	467 25
Blouses	100	3 39	339 00
Woolen mittens, pairs	100	18	18 00
Knit undershirts	100	72	72 00
Trousers, m't heavy, pairs	100	3 85	385 00
Axes	6	68	4 08
Ax-helves	12	15	1 80
Hatchets	6	40	2 40
Hatchet-helves	12	3	36
Woven-felt mitts, dozen pairs	3	.....	13 65
Woven-felt boots, do	3	.....	98 10
Buffalo overshoes, pairs	24	1 00	24 00
Moccasin boots, do	12	1 00	12 00
Total	.....	.....	2,690 96

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

J.—Statement showing articles of clothing and equipage issued to the Military Prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1883, and money value of the property.

Articles.	Quantity.	Condition.	Price.	Amount.
Boots ..... pairs..	354	New	$3 00	$1,062 00
Shoes ..... do...	948	New	1 95	1,848 60
Overcoats ..... number..	48	Damaged	2 00	96 00
Blankets, wool ..... do...	106	Damaged	1 50	159 00
Axes ..... do...	24	New	68	16 32
Ax helves ..... do...	72	New	15	10 80
Scrubbing brushes ..... do...	100	New	25	25 00
Corn brooms ..... do...	630	New	23	144 90
Total	.....	.....	.....	3,362 62

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

I.—*Statement showing articles of quartermaster's stores issued to the Military Prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1883, and money value of the property.*

Articles.	Quantity.	Amount.
Oats ..... pounds..	4,066	$68 56
Corn ..... do...	49,520	657 52
Hay ..... do...	98,196	490 98
Straw ..... do...	5,500	16 50
Castile soap ..... do...	7½	90
Sponge ..... do...	1	3 00
Cooking range ..... number..	1	95 00
Manes ..... pairs..	6	3 30
Mule collars ..... number..	6	13 50
Coaching shears ..... pairs..	2	2 00
Ring-bolts ..... number..	6	4 50
U. S. lead and wheel harness ..... sets..	18	251 25
Axle grease ..... cans..	48	6 72
Total	.....	1,613 72

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

.—Statement showing value of labor performed for the Quartermaster's Department by the Military Prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1883.

	Number of days' work.	Per day.	Amount.
Prisoners, making boots and shoes	23,098	$0 45	$10,394 10
Prisoners, making chairs	1,249	45	562 05
Prisoners, making corn brooms	3,785	45	1,703 25
Prisoners, making boxes and crates for shipping	880	45	396 00
Prisoners, making harness	3,068	45	1,380 60
Prisoners (stonecutters)	52	45	23 40
Prisoners, working on new building	4,013	45	1,805 85
Prisoners, laborers, general police	3,587	35	1,255 45
Prisoners, laborers, storehouses, and general work	29,942	35	10,479 70
Total	.....	.....	28,000 40

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

WAR DEPARTMENT, QUARTERMASTER GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

K.—*Statement showing articles of clothing and equipage manufactured at the Military Prison, Fort Leavenworth, Kans., for the Quartermaster's Department, during the fiscal year ending June 30, 1883; also, cost of materials, labor, &c.*

Articles.	Number made.	Cost.				
		Material.	Civilian labor.	Prison labor.	Royalty on machines.	Total.
* Boots.....pairs..	35,000	$89,662 01	$2,360 00	$7,232 07	$172 74	$99,426 82
* Shoes.....do....	30,000	52,227 75	1,142 00	3,162 03	148 06	56,679 84
Barrack chairs.....number..	4,000	4,513 27	.....	562 05	.....	5,075 32
Corn brooms.....do....	30,000	7,244 18	.....	1,703 25	.....	8,947 43
Extra rods for chairs.....sets..	50	4 31	.....	.....	.....	4 31
Total.....	.....	153,651 52	3,502 00	12,659 40	320 80	170,133 72

* Value of scrap-leather sold during the fiscal year on account of boots, $742.44; on account of shoes, $60; total, $802.44.

Average cost of—	Prison labor.	Material, royalty, civilian labor, &c.	Total.
Boots.....per pair..	$0 20⅛	$2 63⅛	$2 84 1/16
Shoes.....do....	10⅛	1 78⅛	1 88⅛
Barrack chairs.....each..	14	1 12⅛	1 26⅛
Corn brooms.....do....	5⅛	24⅛	29 1/16

Respectfully submitted.

JOHN F. RODGERS,
Captain and Military Storekeeper, U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1883.

L.—*Copy of report of Capt. John F. Rodgers, Military Storekeeper, United States Army, dated April* 9, 1883, *relating to improvement in boots and shoes for the enlisted men of the Army, with copy of action of the honorable the Secretary of War upon the subject, and copies of drawings showing patterns of shoes recommended for trial.*

WASHINGTON, D. C., *April* 9, 1883.

GENERAL: In compliance with your instructions directing me to take up and investigate the complaints made against the boot and shoe now issued to the Army, and report upon the same, I have the honor to give the following as the result of my examination:

I have carefully and thoroughly read the reports and letters submitted, and have made extracts from the same bearing upon the subject. While there is great unanimity of opinion and of feeling upon some points, upon others the sentiments are diametrically opposite and apparently inconsistent.

The Army seems to be almost a unit upon the necessity for a change in its footgear, and in condemning the present boot and shoe, more particularly the shoe. The universal desire is that a *sewed* shoe should be substituted for the *brass-screwed* shoe, the only dissenting opinion coming from Arizona. There is an almost unanimous objection to the *shape* of the standard shoe. It is considered "too low, not coming high enough to support the ankles and to keep out gravel and dust. It curves too much in the sole, which should be made flatter in the shank and straighter. It is too wide for its length and too low over the insteps, and has a clumsy and unsightly appearance. It is too contracted across the toes, having almost a wedge shape, causing not only

pain and discomfort to the wearer, but corns, bunions, ingrowing nails, &c." The complaint is louder and more fretful upon this point than upon any other. If the present pattern be continued, new lasts very much fuller across the toes, with flatter shank and straighter sole, should be procured, and the narrow, constructed curved ones complained of be discarded. *The workmanship* is harshly criticised by a number of officers.

Objection is made to the seam which joins the tongue to the upper. "It hurts the feet, and the tongue is apt to rip off." The side and counter seams are sometimes roughly stitched, and chafe the side and heel of the foot. The counters are frequently weak and wrinkle.

The *material* (wax upper) is the subject of much and serious animadversion. It is considered harsh and stiff, and unnecessarily heavy, Major Breckenridge and others going so far as to say that it is "of inferior quality." Complaint is made that after wetting it becomes so harsh and stiff as to hurt the feet. The skiver insole is of no service, and is often the source of discomfort. The brass screws hurt the feet by protruding through the leather and are also conductors of heat and cold, often causing great suffering and annoyance. There are some few officers who are in favor of the present shoe for *all* purposes, and many who consider it the best for real hard, severe service in the field and about the post. The complaint of harshness and stiffness in the leather is hardly just. I know that great pains and judgment have been used in purchasing and inspecting the wax upper used.

Any leather properly tanned will become harsh and brittle if wetted and suddenly dried. There should be issued to each post a reasonable quantity of oil, dubbing, or other lubricating material, which, properly used, will keep the present standard leather pliant and comfortable.

For garrison shoes, such as would be worn on parade, inspection, leave, or furlough, a softer leather might be used, and it might be wise to use a lighter and softer leather, say a "kip," for the service shoe. The wax upper now used could be made softer in the process of finishing by tanning less and stuffing (with oil) more.

If the *brass screws* were discarded and a *sewed shoe* substituted, much of the fault now found would disappear.

Two lasts, of different widths (A and B) to each number, would obviate some of the complaints now made that the shoe is too wide for its length. I think that there should be two patterns of shoes issued to the Army: one for dress parade and other important occasions, the other for hard and severe service in the field or elsewhere. The enlisted man has a dress coat and hat, why not a dress shoe? The dress shoe could be made of kip leather, coming well up on the ankle, lacing with the patent eyelet-hooks; the shape similar to the "English walking shoe." This shoe could be worn by the soldier when on leave or upon light duty about the post. The service shoe could be like the existing standard, only sewed instead of brass-screwed.

For Arizona the service shoe, if sewed, should be reinforced by hob nails, or with a few brass screws to protect the stitching.

I believe that if the enlisted man could be furnished with a good looking, comfortable shoe, costing from $3 to $4, to wear when he was "dressed up," and could have a service shoe to wear at all other times, complaints would comparatively cease. I say comparatively, for I do not believe it within the power of man, setting aside the Quartermaster's Department, to furnish a shoe which would give universal satisfaction. If there were two kinds of shoes the soldier would draw but few of the more costly ones, using, as Captain McCrae says his men do, "the present shoe for wet and muddy weather, to save the higher priced shoe which they purchase."

The accompanying extracts will show the general sentiment upon the shoe question. I add to the same an extract from my report made November 18, 1882, upon the same subject, as it appeared to me at that time.

Major-General McDowell says:

"The following should be taken into account: shoes to be sewed; the uppers to be pliant leather, to be without shank of any kind; sole to be flat, not turned up at the toe; the heel to be low and straight. The shoes for Arizona should have hob nails in the soles. The sharp character of the broken stones on the hills and routes in that country cut the shoes up immediately."

Col. J. C. Kelton, assistant adjutant-general, calls attention to an English walking shoe of grained leather, made at the Alcatraz Military Prison, which is submitted herewith, and to one recommended by the "Miles Board." Colonel K. is very severe upon the standard shoe (brass screwed) and strongly recommends a change for the better.

Lieut. Col. H. C. Merriam, Second Infantry, says:

"A few men were found wearing boots and shoes not regulation in pattern, but of various styles kept by merchants in the vicinity, some being *utterly unfit* for the use of a soldier. I found upon inquiry that eleven men of Troop H, First Cavalry, and seven men of Company C, Second Infantry, are unable to wear the boots and shoes issued by the Quartermaster Department without having them made over. Found by

examination and trial of the boots and shoes furnished for issue that they were of very coarse materials and still coarser manufacture, the seams not being pressed or hammered down, and the leather about the ankles is often thick and stiff, forming wrinkles which chafe and injure the feet. I have tried to wear the boots and shoes now issued, and failed to find them comfortable. It is my belief that if soldiers were required to wear them invariably the complaints would be so constant as to enforce an improvement in their manufacture. As a matter of fact, the men are often permitted to purchase boots and shoes according to their own fancy, a practice which tends to an utter want of uniformity and to absurdities in the way of fancy heels and toes, to say nothing of their utter unfitness for the use of soldiers in most cases."

Brig. Gen. N. A. Miles, in commenting upon the above, says:

"I have frequently found men wearing shoes and boots utterly unfit for service, and in which they would break down in a few days' marching. The excuse given by the company commanders for not correcting this evil is that the General of the Army sanctions this. Does not think that it was intended to give such latitude as permits troops to wear such clothing as pleases their fancy. Such liberty gives them permission to wear any kind—rubber, leather, or canvas boot, slippers, shoes, or moccasins, the use of which would injure the foot. Thinks that using such boots or shoes unfits them to wear the Government shoe when none others are available, and when starting upon a campaign would unfit them for marching. Thinks the foot covering of more consequence than any other. No other than the regulation boot and shoe should be allowed to the soldier. Also, recommends that complaint as to quality and manufacture of the boots and shoes made by the Quartermaster Department be referred to the officer responsible for the manufacture, in order that the best covering for the feet may be furnished."

Col. Frank Wheaton, Second Infantry, says: "Complaints of ingrowing nails are universal. The leather used in the boots and shoes is stiff and unyielding." Col. Frank Wheaton, Second Infantry, continued: "My men would gladly give more money for a better shoe."

Col. A. G. Brackett, Third Cavalry, says that he is told that the men prefer the Military Prison shoe to the contract shoe. Men are willing to pay from $2.50 to $3.50 per pair for a better shoe. The complaints he hears are that the shoe hurts the feet and that the leather is harsh and stiff.

Lieut. Col. W. Redmond Price, Sixth Cavalry, said: "The men marched with alacrity over most difficult trails, keeping up with light cavalry, and reached camp each day at the same time as the mounted force. This in a country so rough that they completely wore out two pairs of shoes in a march of about 300 miles."

(Note by Captain Rodgers: The shoe worn by these troops was the standard shoe made at the prison, and its value as a *marching* shoe would seem to be established by this officer's statement. Troops on foot could not keep up with cavalry if their shoes were not comfortable.)

Col. A. R. Chaffee, Sixth Cavalry, gives as his opinion that the insole is of no use. Some of his men prefer sewed or pegged boots, while others find no fault with present boot, only preferring long tops. Some of the boots issued have weak counters. He says unqualifiedly: "There is no boot so serviceable as the brass screw. None other are worn by any one, soldier or citizen. Sewed boots will not last; the gravel and rocks cut the thread." He regards the present boot and shoe as good, but they can be improved in material. Soldiers buy boots and shoes generally for the reason that those they purchase are lighter, neater in appearance than the Government make, and preferable for these reasons for wear. "All of my men wear the Government boot or shoe for rough work, and on campaigns and scouts. All wear a light boot or shoe, which they have purchased from the store, on guard parades, inspections, &c." He recommends that a plain calf shoe, coming well up on the ankle and fastened with a single buckle, be established for garrison.

Capt. M. H. Stacey, Twelfth Infantry, would prefer the English walking shoe, for which his men are willing to pay from $4 to $5. He makes the common complaint of harsh leather, bad shape, and brass screws hurting the feet. Thinks Military Prison shoe does not wear as long as those formerly issued.

Capt. James Jackson, First Cavalry, thinks the shoe excellent for campaigning if kept well oiled. In garrison it gets hard, and they are not sufficiently shapely. For garrison should have a lighter, better looking shoe, keeping present pattern for field and fatigue purposes.

Capt. J. M. Norvell, Twelfth Infantry, prefers a sewed shoe; thinks the insole of no use, and finds fault generally with the present pattern.

Lieutenant Kinzie, Second Infantry, says that the shoes are too wide in proportion to their length, and of such shape as to allow the men's feet to slide to the front and press against the toe of the shoe; the leather thick, stiff, and harsh; would prefer a shoe of lighter upper, softer than now used. His men are willing to pay $4 for a good shoe.

Sergeant John L. Benton, Company G, Second Infantry, would prefer a sewed shoe; *would like* broad sole, counter on outside, flat heel, patent hooks for lacing, and plia-

ble upper; is willing to pay $5 for such a shoe; would like to have his shoes issued *unmade;* finds the usual fault with present shoe.

Capt. Charles Keller, Second Infantry, calls attention to the counter, which is coarsely made. The shoe made by Buckingham & Hecht was of softer leather and of better pattern than the standard, and far better liked by the men.

Capt. C. A. Dempsey, Second Infantry, says that his men would prefer a sewed shoe, and are willing to pay $4.50 to $5 for a good sewed shoe; thinks the leather harsh, the shape bad, and the screws objectionable of the standard.

Capt. H. C. Egbert, Twelfth Infantry, would like the English walking shoe at a cost of $4.

Capt. A. F. Smith, Eighth Infantry, says that the shoes are too small over the toes; tongue should not be sewed on the upper as it rips off; shoes are too low; screws hurt the feet. The men generally prefer a *sewed* shoe made to lace over the ankle, and are willing to pay from $2.50 to $3 for an improved shoe; has worn the Military Prison shoe in the field, and thinks the leather too hard, and that a sewed shoe would be better for service than those now used.

Capt. Daniel T. Wells, Eighth Infantry, says that his men dislike the screwed shoe, and old soldiers regret the non-issue of the old sewed shoe. The present shoe is too short. The men draw a size larger than is called for and have them stretched at the toes. The stitching is roughly done, and chafes the feet. The uppers are of such stiff rough leather that they can never conform to the foot.

The present shoe is not high enough, and is ugly in appearance. Have never seen any that looked becoming unless altered by the company shoemaker. Then they become useless for anything but dress occasions. The shoe known as the common-sense shoe is the one preferred by his men. It has low heel, tight on the instep, double extension sewed sole; laces through eyelets and hooks to the top, coming at least two inches above the ankle-joints. The uppers should be of softer leather, light enough to conform to the shape of the foot. For such a shoe his men are willing to pay $6 per pair. Recommends that 1,500 pairs be made and 6 pairs be sent to each company of infantry for trial.

Captain W. Mills, Second Infantry, thinks the shoe too low over toe, leather harsh, and that the screws hurt the feet. Thinks, from his own experience as an enlisted man, that the sewed shoe furnished the soldier before the war and during first year of the war was a better one and more easily worn than the screwed.

Captain E. B. Savage, Eighth Infantry, says that his men complain that the upper leather is too hard; that the screws are liable to protrude into the shoe on long marches; that the space between the sole and upper at the toe is not sufficient to be comfortable. They desire a sewed shoe, the upper to be of strong calf-skin, and that they would be willing to pay $2.82 for a good shoe. This is $1 more than the cost of the present shoe.

Capt. W. T. Worth, Eighth Infantry, says: "I have heard no serious complaints of the present shoe, either on the march or in garrison. If a little more space were left at the toes and at the junction of the upper and quarters the *Government shoe,* in my opinion, *could not be excelled.*" (Italics mine.—J. F. R.)

Capt. J. C. White, First Artillery, reports that the screws hurt the feet, and the shoes are too tight across the toes. His men offer no objection to paying a higher price for a better article.

Lieut. John E. Hyde, Eighth Infantry, says that his men have not been allowed, when on duty, to wear any but the Government shoe. The only fault found was that the uppers are too flat to allow room for the big toe.

Capt. F. A. Whiting, Eighth Infantry, says that, with the exception of the uppers being too flat, no fault is found with the shoe now in use.

Lieut. G. B. Backus, First Cavalry, reports: "No complaint of their poor quality has ever come to my ears. The greater portion of the shoes on hand at Fort Klamath, Oregon, are from the Military Prison, and although rougher in appearance than citizens shoes, are believed to be a much more comfortable shoe for troops on the march, and will, I think, wear better. It is believed that a lighter and finer shoe should be furnished for issue while in garrison, as the main reason known to me for the purchase of citizens' shoes by enlisted men is *appearance.* The principal defects in the Military Prison shoe are its rougher construction and the seams across the insteps, which, on being wet, are likely to stiffen and thereby become painful."

W. A. Russel, first sergeant, Company C, says that he and thirteen non-commissioned officers and privates prefer the Government shoe; three others have no objection to it; one prefers overshoes; one, light kip upper; thinks the Government shoe too hard; one, the English gaiter, box toes, costing from $7 to $12; one, a calf-skin upper; one, a shoe with a wide sole; one, an English walking shoe, costing $5; one, *sewed* Government shoe; dislikes brass screws.

Capt. G. H. Benton, Twenty-first Infantry, wants a shoe fuller across the toe. Military Prison shoe is made of coarse leather.

Lieut. H. M. Andrews, First Artillery, says: "The men use a citizens' shoe, for which they pay about $4. The objection to the Leavenworth shoe is that the leather

used in the upper is coarse and stiff, and after getting wet hurts the feet. The shoe is too low at the toe; the men have the shoe relasted, and, after lasting, the brass screw is apt to work through. In some cases no complaint is made. Recommends a sewed shoe of lighter material, and upon lasts of different width for each size of shoe, with greater height at the toe; to cost about $3 per pair. Men are willing to pay this price."

Capt. J. M. Ingalls, First Artillery: Shoes made at Military Prison appear to be well made, and the sheep-skin lining of the inner sole seems to prevent, in a great measure, the screws from hurting the feet. Many of his men wear citizens' shoes, for which they pay from $2 to $5 per pair. Their principal objections to the Government shoe are, 1st, the hardness and stiffness of the leather; 2d, the impossibility in many cases of getting a shoe to fit the foot properly in consequence of the shoes of each number being all of one width. Sewed shoes, similar to those issued to the Army a few years ago, but with uppers of a lighter and better quality of leather and made on two widths to each number, would be an improvement.

Capt. Charles Porter, Eighth Infantry, says: "Some of the shoes issued are marked M. P., others not." The defects mentioned hereafter exists in the contractor's shoes as well as in those made at the Military Prison. The complaints are that the shoe is clumsy, and cut unlike any other made. The uppers are stiff, hard, and unpliable; the shoe too flat across the toes; tongue made of two pieces.

The shoe does not reach sufficiently high on the leg, and does not fit sufficiently close around the ankle-joint to prevent the entrance of sand and dust. This cannot be helped while the present shoe is continued. He finds a unanimous preference for a sewed shoe which will come well up over and cover and protect the ankle, to be laced up in front; something of the shape and character of the English walking shoe is desired.

Capt. Tully McCrea, First Artillery, says: "My company shoemaker says that the shoe is too wide, heel is wide and low instep and toe low; shoes do not correspond in material, besides one shoe sometimes has a heavier counter than the other. The uppers are too heavy and of an inferior quality, and become hard after a little wear. The screw protrudes and hurts the feet. The enlisted men of my battery are not compelled to wear the shoes issued by the Quartermaster's Department, but are allowed to purchase their shoes. *Some of the men draw the Government shoes and wear them in wet and muddy weather to save the higher-priced shoe which they purchase. They pay for the shoe purchased from* $3.50 *to* $5." (Italics mine.—J. F. R.)

Capt. C. P. Eakin, First Artillery, says: "Shoes issued to my company with the insoles found to be no better than those of previous issues." His men desire a better shoe, and are willing to pay from $4 to $6.

Lieut. C. H. Hunter, First Artillery, says: "The majority of enlisted men in Battery B prefer citizens' shoes to those furnished by the Government. The leather is very hard and rigid, especially after being wet, and greasing does but little good. Owing to this, in part, men buy shoes too large for them. The brass screws hurt the feet, the insole affording but slight protection. The shoe has a peculiar shape and seems to fit the foot only in rare cases, thus making the foot sore and necessitating a larger shoe than that otherwise worn. The shape of the shoe is ugly, and the foot has a very clumsy appearance. Some men complain that the shoe is too low to keep sand, dust, &c., from the feet. The average price given for citizens' shoe is $3.50, and men would be willing to give that for a good shoe."

Captain Haskin, First Artillery, says: "Of twenty-six men present at inspection only one had on the Government shoe as issued. Four others had drawn Government shoes and had had them altered to fit the feet at a cost of $1.50. In each case the cobbler had made a very neat, well-fitting shoe out of the shapeless mass of leather that had been received. The average cost of the shoes that were worn by my men that day was $3.96, nearly $4. Since my men do not wear the Government shoe I have heard few or no complaints about it. Their dissatisfaction takes a more practicable form."

Lieut. F. C. Nichols, First Artillery, recommends that a shoe costing $2.50 per pair, modified box-toe last, be issued, which would remedy the complaint of narrowness across the toes.

Capt. J. P. Sanger, First Artillery, says: "The boots and shoes used by my men were partly made by J. McGowan, and balance by military prisoners." His men pay as high as $4.50 per pair. Thinks that when the shoes are long enough, they are almost invariably too wide; uppers too short; counters weak; side seam hurts the feet; water soaks through nail holes in wet weather; are to low at instep and split in sides; over rough and stony ground they last about one month; when repaired the uppers soon break away from the soles; the nail heads ruin the socks and sometimes hurt the feet. Boots are not high enough.

Capt. L. A. Abbott, Sixth Cavalry, says: "The boots and shoes of whatever make issued to my troops are generally too wide and frequently too short for the wearer. The leather in the uppers is too heavy to admit of its conforming to the foot of the wearer, and as soon as it becomes wet wrinkles up and chafes the feet; the white

sheep-skin insole soon becomes loosened and curls up, necessitating its removal, leaving no protection against the screw that will work up through the bottom of the shoe. A better and more dressy and comfortable article should be provided. Most soldiers would prefer a calf-skin shoe, neatly made, of assorted sizes, that could be furnished for about $3.50. The same faults exist with boots for cavalry. A man with a long foot is obliged to get a large sized boot in order to have it long enough, and then it will be so tight in the instep and so wide that it will require two or more pairs of heavy woolen stockings to fill up the vacant space in order to keep the foot in place and from chafing. A decent-looking, better-made top boot should be furnished for cavalry. Many of my men now pay as high as from $7 to $10 for boots rather than take such as are now issued. Men would be willing to pay $5 for a decent-looking, comfortable boot. Most of the men, and especially if they have any pride, will not wear the Government boot and shoe as now issued with a full-dress uniform."

Captain A. D. King, Third Cavalry, says: "Boots and shoes that have been issued to enlisted men in Troop D, Third Cavalry, bear the stamp M. P., and invariably give poor satisfaction. The chief cause of complaint to be found against the shoes are that they are in no way made in proportion to the foot; fitting often miserably, and never well; that the ill-fitting causes discomfort in wearing. The seams in sewing are so prominent and hard on the inside of the shoe that it causes pain and often wears the foot in this part callous, making it impossible to wear them. That after the shoes have been worn in marching for any length of time the screw works through the soles upward into the feet, causing considerable annoyance. What has been said of the shoe can also be applied to the boot, with the additional remark that the boots, although not probably so hard upon the feet, are altogether inadequate for the duties intended to be performed with them by a cavalryman."

Lieut. George E. Converse, Third Cavalry, says: "The boots and shoes now issued are, in my opinion, wholly inadequate for useful service. The leather is coarse, poorly tanned, and porous, readily admitting water, and on drying becomes hard and wrinkled, chafing and blistering the feet and causing great inconvenience to the unfortunate wearer. The cavalry boot is in no respect fitted for cavalry service, the leg being much too short to prevent the admission of rain in riding *and too low in the instep to fit a man whose foot is not deformed, unless they are much too large for him otherwise.* The breadth is out of all proportion to the length, and the stiffening in the counters break down on becoming wet, rendering it almost impossible to wear the boot at all. They are clumsy and ungainly in appearance, and as a cavalry boot are worthless. The men of my troops would willingly pay the difference in price to be furnished with a neat, comfortable boot instead of the one now issued, which they think dear at any price."

Maj. J. C. Breckinridge, assistant inspector-general, has for some time been finding great fault with the boot and shoe as now issued, and in severe and sweeping language he says: "That the complaints are startling; that the men are willing to pay from $4 to $5 per pair for shoes if they can get their money's worth. Thinks that greater care should be exercised in making the present shoe, if it be continued in service. In inspecting Fort Lowell, Ariz., found men of the Twelfth Infantry wearing citizens shoes, and was told that they were better, cheaper, and more comfortable except for *marching* (italics mine—J. F. R.) than the Government shoe. That the latter, as now issued, are generally of inferior quality, but could be worn on long marches without injuring the feet, unless the leather after only slight wear become wet, and then uncomfortably hard, or the screws of the sole protruded into the feet. Recommends that several pairs of the new model, hand-sewed, neat shape, soft upper, bellows tongue, laced about the ankle, well placed and smooth seams, flat heel, straight, pliant, strong and smooth counters, be made in different manufactories and issued to such men as desire them at the extra price." He again says: "The boots and shoes should be sewed, of softer leather, and better finish."

In conclusion, I beg leave to submit two pairs of shoes, marked 1 and 2, respectively; No. 1 is an English walking shoe, seeming to possess the qualities universally demanded, viz, broad soles, flat shank, pliant (light wax upper) leather, counters outside, broad heels, laced high up over the ankles, and well shaped. It will, I believe, be popular with officers and men. It might, perhaps, be made a trifle fuller across the toes. No. 2 is a bootee, which would be convenient and serviceable while campaigning, or on any severe and exposed duty. It is easily taken off and put on, even if wet. The heel of this bootee might be a trifle longer over the shank, and a little lower. On one side could be closed, as in the ordinary boot, the opening on the outside giving all of the play necessary. The cost of the English walking shoe, in quantities, would be probably, for hand sewed, $4, for machine sewed, $3.50.

The bootee would cost about the same price.

Respectfully submitted.

JNO. F. RODGERS,
Captain and Military Storekeeper, U. S. A.

Brig. Gen. RUFUS INGALLS,
Quartermaster-General, U. S. A.

WAR DEPARTMENT, QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., April 24, 1883.

SIR: I have the honor to bring to the attention of the honorable the Secretary of War the subject of boots and shoes of the enlisted men of the Army.

Previous to, during, and subsequent to the late war the Army was supplied with *hand-sewed* boots and shoes until 1872, when the stock of boots and shoes left on hand at the close of the war had become partly exhausted or unfit for issue from long storage.

A change in the foot-gear was made May 2, 1872, by order of the Secretary of War, who approved the proceedings of a board of officers of which Col. H. B. Clitz, Tenth Infantry, was president, and which recommended that boots and shoes having the soles fastened by means of *brass screws* be made the standard for the Army. Since that time the troops have been supplied with this kind of foot-gear; first, by purchase under contract, and since 1877 by manufacture at the Military Prison at Fort Leavenworth, Kans. But ever since their introduction serious complaints (the character of which is fully set forth in the accompanying report) have been made, especially from the Pacific coast, and the Quartermaster-General is fully satisfied that a return to the *sewed* boot and shoe is the only remedy to bring about the much desired and sought for change.

Capt. John F. Rodgers, Military Storekeeper, United States Army, on duty in this city, under instructions from this office, has made this subject a special study, and I now have the honor to forward his report and accompanying two sample pairs of shoes. I concur in his suggestions, and recommend that before adopting any specific standard, five hundred pairs, like samples, be procured.

Sample No. 1 may be considered a dress shoe, and No. 2 a service shoe. They should be sent out for trial in active service, and reports called for to ascertain whether they will prove satisfactory, and what advantages they possess over those now furnished by this department.

Further and more intelligent action can then be taken, as in my opinion the test in active service is the only one which is of real value.

Very respectfully, your obedient servant,

RUFUS INGALLS,
Quartermaster-General, U. S. A.

The honorable the SECRETARY OF WAR,
Washington, D. C.

[First indorsement.]

Respectfully referred to the Inspector-General for remark.
By order of the Secretary of War.

JOHN TWEEDALE,
Chief Clerk.

WAR DEPARTMENT, *April* 30, 1883.

[Second indorsement.]

HEADQUARTERS OF THE ARMY,
Inspector-General's Office, May 8, 1883.

Respectfully returned to the Secretary of War.

The information contained in reports of inspections received in this office closely accords with that collected by Captain Rodgers as to complaints regarding the boots and shoes now used in the Army, in which the sole is fastened on by brass wire screw pegs. The remarks and recommendations of Captain Rodgers seem to be highly judicious.

The recommendation by the Quartermaster-General of an experiment having in view a return to sewed shoes, as formerly used in the Army, by the manufacture of 500 pairs for trial, similar to patterns submitted by him, I think prudent and wise.

I particularly recommend a trial of the bootee marked sample No. 2; sample No. 1 likewise impresses me favorably.

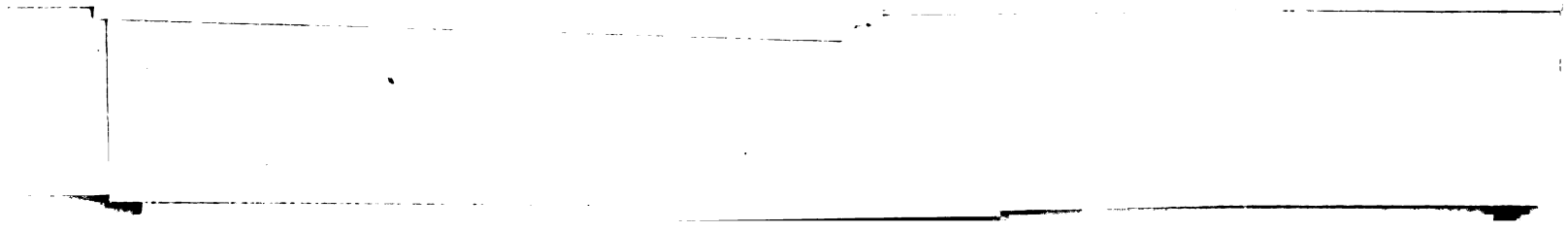
A. BAIRD,
Lieut. Col., Assistant Inspector-General, Bvt. Maj. Gen., U. S. A., in charge.

[Third indorsement.]

The recommendation of the Quartermaster-General is approved.
By order of the Secretary of War.

JNO. TWEEDALE,
Chief Clerk

WAR DEPARTMENT, *May* 9, 1883.



M.—THE MILITARY SHOE.

By Maj. S. A. Salquin,
Major of the Seventh Regiment of Swiss Infantry, Secretary of the Military Department of the Swiss Confederation.

FIRST PRIZE IN THE OFFICIAL MILITARY COMPETITION IN 1874.

Assisted in the technical part by the brothers Giacomo and Stefano Tirone, of Turin.

With a preface by Division Colonel Lecomte,
Commandant of Division II of the Swiss Army.

[With twenty illustrations inserted in the text.]

Translated by H. L. B.,

UNDER DIRECTION OF THE QUARTERMASTER-GENERAL, U. S. A.

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PREFACE.

It has been ascertained that in all armies, in all contemporary countries, often a considerable number of men are for the time being rendered unfit for service by bruises on the feet, caused for the most part by various faults in the shoe.

Thus to search out the ameliorations of which this subject of foot-gear is susceptible, constitutes a problem not less important than useful. It has often been proposed, but until the publication of the first work of Captain Salquin, in 1876, entitled "The Common Sense Shoe," a satisfactory solution has never been found.

Now, after further study, this officer publishes a new work, to which he has requested me to contribute a preface.

I have read it with lively interest; I have weighed with care the references and demonstrations made use of by the author, and I am happy to be able to entirely sympathize with his efforts, and to express the opinion that the problem of the best military boot seems to me now stated and solved by him in a conclusive manner. He has only endeavored to throw off the double tyranny of custom and fashion.

After having clearly shown that the form actually given to the shoe does not correspond to that of the foot, nor even to its natural dimensions, and that it compresses it so as to turn it outside of its normal axis, the author of this work proposes the

adoption of a model shoe in which the foot will be really at ease; can place itself naturally and move easily, without pressure or friction, and therefore without causing the least soreness.

The question of the shape and construction of the shoe, that is to say the *form*, being solved, it remains to decide upon the *kind* of boot which it is best to adopt, especially for the infantry, by taking into consideration the various other exigencies besides the principal one of avoiding wounds and contusions. In this respect, also, which appears secondary, a reform is legitimately claimed.

In Switzerland various experiments have been made to this end. Among others, after having used the loose shoe, then the shoe with gaiters of more or less length and size, they arrived at the boot worn over or under the pantaloons, with a pair of shoes for a change. But they have not failed to see that the boot is far from rendering the service which was expected of it. It often makes the step heavy and chafes the feet and legs.

A recent fact—the victims of which were the soldiers of an army which may pass for the first in the world—has proved that the boot has some great disadvantages: for certainly it is one, and a most disagreeable one, for a soldier to be obliged to leave his boot in the mud. Will this inconvenience be avoided by making boots which are tight about the instep? Yes; but by creating others not less serious.

The best boot made cannot fulfill all the requirements; not only do the dimensions of the foot change by cold and heat, at rest and in walking, but the boot itself changes by dampness, by dryness, and by heat.

Suppose that a soldier enters upon a campaign with boots absolutely perfect, which will always be difficult, it does not result that they will remain so under all circumstances. It will not be long before the various above-mentioned agents will have a share in the affair, and the boot will become too tight or too large in the instep.

Having become too tight the boot can only be put on with great difficulty, and, once on the foot, will not fail to cause bruises which will render the foot-soldier for the time being unfit for service. Having become too large it will slip about, rub the heel, and fatigue the man in marching, without taking into consideration the possibility of its being left stuck in the mud, as at the grand review at Strasburg, September, 1879.

If we add to these faults of the boot, its great size, and its relatively high price, we see that it is necessary to replace it by something more reasonable and more convenient.

The system proposed by the author (buskins *à soufflet* for marching shoes, and the Neapolitan shoe for a change when off duty) appears to me to fulfill the desired end, which, nevertheless, can only be proved by experience and practical tests which the Government alone can order.

It is hoped that, in a question so vital to the infantry of all countries, since everywhere to-day is felt the need of increasing the readiness and power of marching, no state will refuse to make a trial by which its troops are expected to reap advantages, and, if this trial should be conclusive, as I firmly believe it will be, the military authorities cannot hesitate to introduce a change which is certainly better justified than many others.

Finally, this work contains some excellent advice upon the linen, cleanliness, and the hygiene of the foot, and upon the care and preservation of the boot, undeniably useful, not only to the military man, but to every one in civil life who wishes to walk easily and unflaggingly.

On the whole, this work treats the important subject of the military shoe in a more complete and thoughtful manner than has ever been done before, and I would recommend that it be carefully read by the authorities and by those of our military comrades who care for whatever can augment, even by progress more solid than elegant, the efficiency and well being of the army.

I wish great success for this work, and for the officer who has taken the initiative.

Lausanne, January, 1880.

FERD LECOMTE,

Division Colonel, Commandant of Division II of the Swiss Army.

INTRODUCTION.

The work which we have undertaken is specially designed for the Secretary of War of the United States of America.

It aims to show:

1st. That the actual form of the army shoe is defective, that is to say, the form is not the same as that of the foot. *The result is that instead of giving it their form, the feet are obliged to conform to that of the shoe.*

The inability of troops to march has rarely had other cause, and it is because this fact has never been taken into consideration that the imperfections of the army shoe have been sought for everywhere else than where they were, and where they now really are.

2d. That the system of the infantry shoe, especially as regards the contrivance by means of which the different kinds of shoes are fixed upon the foot and fastened to the leg, has not undergone the improvements of which it is susceptible.

3d. That all the new models, tested to the present time, have not yet solved the question as to what is really *the best marching shoe for the army*. This being demonstrated, and the necessity of a reform in the existing shoe being established, we will indicate the means of accomplishing it by the introduction of a shoe of reasonable shape, that is, one which conforms to the shape of the foot, and which needs only a short trial to show its superiority over all which have preceded it to the present time. This work is accompanied by samples of shoes which fulfill the preceding conditions; we have, besides, for distribution to all the states which may request them, models of shapes in wood (lasts) similar to those used in the manufacture of our sample shoes.

We will explain, in describing them, the advantages of these new styles of shoes; we have worn them long enough ourself to be able to assert that nothing will better preserve the feet of soldiers in their normal condition, for they will suffer no distortion whatever, and in the future they will perform marches without suffering the inconveniences resulting from the use of the former shoe; and, lastly, this important advantage, that these styles do away with the employment of gaiters in those states where they are still in use.

The question of the army shoe has been considered by all military authorities. They still continue to consider it, but they have reached no practical nor definite solution of the matter, for, with the exception of some few improvements, the shape, style, and make-up of the military shoe remain as they ever have been worn in all countries.

With the exception of the shoe, there is no part of the clothing which has not undergone either numerous improvements or a complete change. Such will continue to be the case for a long time to come, if we refuse to understand that the shoe has never had a form similar to that of the foot, and that nothing has been done to give it a form more or less approaching it. But it is to be hoped that a question as vital for the army as it is important for the material well-being of the troops—*the strong arm of the State*—will cause the prejudices that every new invention meets with in its path to disappear.

And, moreover, this does not appear as a new invention, but, on the contrary, it is a demonstration of a purely anatomical, pathological, and scientific principle; and what astonishes us is that no physician has made it known before this time, since it would have been sufficient for him to assert its existence, and to show that nothing is more simple than to apply it to solve, once for all, the important and disputed question of the army shoe.

That state which desires to have a really capable army, and of which it can be said it is truly an army upon a *good footing*, ought to be interested above all to know how it can march. This duty is one of the most important that can be imposed upon a state; for it is well known to us all that the numerous experiences that have been repeated everywhere, of the inability of troops to march, have been deplorable in every respect.

These experiences are so much more to be deplored, since the inquiries, the investigations, and the tests of every kind to which they have given rise, have failed to discover the single and only cause of the great number of men who, having bruised feet, claim a place in the ambulances and the assistance of medical skill.

It is true other causes have also contributed to this result; but the principal fault, whence arise all the others, is that which we have indicated at the beginning of this work. *The shape of the shoe is not the same as that of the foot.*

No country has furnished an exception to this unfortunate rule, for the style of shoes generally adopted at the present time is regulated by the desire for elegance and not for comfort.

The Swiss army is not only in the same situation, but it is still more exposed than any other to the inconveniences of the shoe worn by its troops, for it is the soldier who furnishes it and not the state. The result is that all possible shapes and qualities of shoes are represented in the Swiss army, and the injuries from them much more disastrous. This state of things has been verified at all times, and in a still more striking manner since the occupation of the Swiss frontiers in 1870–'71.

The universality of the complaints which have arisen under this state of things has had the effect of leading to an investigation of the causes; a meeting was held by the officers, by whom was demanded a work destined to solve the three following questions:

"What are the faults of the present shoe of our troops?"

"What are the means of remedying them?"

"What ought and what could the state do to this end?"

The work which was required of the Swiss officers was evidently an unpleasant task for those who had not made this question the object of special study, of numerous observations, and of constant thought.

Surprising to remark, no military surgeon took part in this meeting.

Who is there, however, who has the mission, the duty, and especially the great facility to treat such a subject if not a physician, charged with watching over the health of the soldier, and expending on him constant watchfulness? And it is well known that the attention most frequently demanded is that required on account of wounded feet. However that may be, the first prize has been conferred upon the work that we have the honor of presenting upon this important question.

This result has been made public by the voice of the Swiss press; information has been asked by a great number of officers and by the representatives and military attachés of many of the principal states accredited to our country, and it is to fulfill the engagement that we have contracted with them, as well as to contribute our part in elucidating a question so important for all armies, and which has never yet been treated in so profound a manner, that we have prepared this work.

If it be asked why a Swiss officer takes the liberty of submitting the fruit of his studies and experiments to the secretary of war of other states, permit us at least to indicate the principal motives, hoping that every one will appreciate them at their just value.

1st. The question of the military shoe has never been solved in any country, because the tests of every kind to which it has given trial have not been based upon simple anatomical principles, which would have definitely solved the difficulty.

2d. With the exception of Switzerland and the United States of America, all other states have permanent armies, and so are more directly interested that their troops are provided with a shoe which fulfills all the required conditions.

3d. The solution which we have given to this question is absolutely definite; that is to say, that the *common-sense shoe* is the only one which takes into consideration the anatomy of the foot.

4th. Finally, though we have not been engaged to publish a special work upon this subject, still we have not thought it right to be silent concerning an improvement which will evidently be adopted sooner or later in the armies where the best style of shoe for issue to troops has not yet been discovered.

We close this introduction with a number of quotations, which show the importance attached, at all times, by those whose names are known in history, to the question of the shoe.

The Dutch professor, Camper, anatomist and surgeon of the last century, was the first to publish an interesting book upon the best shape for shoes; among other things he says:

"One is astonished that in all ages intelligent people have been interested in caring for the feet of horses, asses, oxen, and other animals used for work, or pleasure, even to the smallest details, and have neglected to care for the feet of their own species, leaving it to ignorant shoemakers accustomed to work only according to the ridiculous fashion and corrupt taste of their times."

This opinion, expressed in language more forcible than polite, however, as yet has lost none of its truth.

Until 1858 no one was occupied with this question. But during that year Meyer, professor of anatomy at Zurich, published a pamphlet entitled, "*Die richtige Gestalt der Schuhe*" (the proper form for the shoe). The author of this work, advocating the same anatomical principles as the Dutch professor, Camper, treated the question only from this single point of view, but it is natural enough that the manufacturers, intrusted to put in practice what had been wisely shown in theory, did not succeed in surmounting the difficulties; or rather did not take the trouble to find out how it would be possible to carry out the reforms which Professor Meyer demanded. Instead of acknowledging the truth of the new ideas which had been made plain, and especially instead of admitting that the shoe was susceptible of improvement, as well as any other part of the clothing, they rebelled for the most part against the new form proposed, and did not understand that in their position of masters of the trade, to them belonged the duty of seeking how it would be possible to obtain a result which should put an end to all special difficulties. However that may be, the work of Professor Meyer drew the public attention to this subject, and was the signal for a series of publications and pamphlets, of which we will cite the following:

Dr. Craig immediately translated the Meyer pamphlet into English. Dr. Humphrey published, in his turn, a pamphlet entitled *The human foot and the human hand.* James Dowie, a shoemaker of London, who had practiced his trade for sixty-four years, did not wish to be behind, and we owe to him a pamphlet called *The foot and its covering.* To tell the truth, his work was only a translation of Camper's book. Finally, the

journal *"All the Year Round"* published a very important article on this subject, called *Easy boots.*

In Germany Mr. Gunther published a work: *Ueber den Bau des menschlichen Fusses und dessen zweckmässigste Bekleidung* (of the formation of the human foot and the best covering for it.)

In Denmark Colonel Lunddahl treated the question in a pamphlet with the following title: *The proper form to give to the shoe.* Dr. A. Nyström, of Stockholm, in his turn, treated the same subject in a work entitled, *The foot and the hygienic form of shoes.* The preface of this book is by Dr. Santesson, professor of surgery, who closes it in these words:

"The good old proverb says, *Every one to his own trade;* but this proverb ought not to hinder the shoemaker from giving to the shoe a shape as much as possible like that the Creator has given the foot. No human art will be able to invent one altogether more natural and more agreeable."

The authors of all these pamphlets and publications are unanimous in demanding a reform in the shoe, and in basing it solely upon anatomical principles. But whether their works were too scientific, or whether they were only circulated among a certain class of society, it is evident that the mass of the people received no advantage from them; no one gave himself resolutely to the work; so it made no progress, and we believe that we alone have (thanks to a familiar demonstration of the scientific part of the subject, and especially by the practical means of putting it into execution) succeeded in causing this last opinion to be shared as well by the people in general as by the masters of the trade in particular.

It is true, also, that the authors of all the works which we have cited are, without knowing it, themselves the cause of their excellent designs not being carried out by any one; for they have limited themselves to one single statement of the question, without taking into consideration the material difficulty in which one would necessarily be placed who should endeavor to find out anything in the midst of a multitude of details, excellent, without doubt, but of which the fault was in not having undergone any co-ordination.

We have endeavored to avoid this difficulty by dividing our work into two principal parts—the scientific and physiological in one part, the technical and practical in the other part. Each contains a series of developments and conclusions which it would not have been difficult to divert from their destination. In this manner each thing is in its place; no confusion is possible; one chapter is necessarily the logical consequence of that which precedes it, and without any great effort one will easily find what he needs.

In military life persons have been limited to aphorisms; to making assertions to show of what the military shoe ought to consist, &c.; but, as we shall see by the quotations following, they have gone no further.

Marshal Saxe said that the nation which gave the best shoe to its troops would have an immense advantage over its enemies, by keeping the men always in a condition for marching.

Again, Marshal Saxe says: "It is not the *arms* but the *legs* which win battles."

In an almost identical sense, and as strategically as physiologically, Napoleon said that he made war, not with the *arms*, but with the *legs* of his soldiers.

Wellington expressed the opinion that two things were especially necessary to the soldier: "A pair of *good* shoes on the feet, and a pair of *good* shoes in the knapsack.'

Marshal Niel, in a speech delivered before the legislative body in Paris, in 1868, thus expressed himself: "*Shoes* have the same importance to the infantry that horses have to the cavalry."

Dr. Tourainne, surgeon-major of the first class of the French army, began, in 1856, to make observations upon the shoe. In a note published in 1872 he made the following pretty compliment upon the use of shoes and gaiters:

"It has always resulted that from 25 to 30 per cent. of the effective force (of an army) are wounded in the first day's march, and 10 per cent. are obliged to demand the services of the surgeon of the regiment."

He indicates as the principal cause *the bad shape* of the shoes, their bad construction, &c.

About a year before this, Dr. Champouillon, chief surgeon of the first class, also of the French army, with the hand of a master treated the question of the shoes of the troops, and especially of the preparation, tanning, and quality of the leather. Like all his predecessors, he was actuated by the same anatomical principle so often invoked, of knowing that the shoes ought to be well made and *"to be exactly fitted to the shape of the foot; that is the true solution of the question,"* he adds.

Finally, Professor Morache, surgeon-major of the first class of the French army, in his remarkable treatise on military hygiene, which appeared in 1874, summed up the conditions which the military shoe ought to fulfill, as follows:

"To find for the infantry soldier a shoe at once resisting, supple, and relatively light, reaching high enough to do away with the use of gaiters, which always require much time to take

off or put on, adapting itself readily to the shape of the foot, and being able, in a measure, to accommodate itself to the swelling of the member from the effects of marching."

These conditions, summed up and simplified by Professor Morache, are the same as those drawn up by Drs. Tourainne and Champouillon. It remains to us, however, to reproduce textually the conditions demanded by these two last *savants*.

Dr. Tourainne says:

"A faultless shoe ought to completely protect the foot; to be fitted exactly to it without cramping it, without making it uncomfortable; to follow all its movements of stretching, of bending, of enlarging, and of shortening; to allow it to stretch itself out in every way, and finally to leave it the greatest liberty, both for its motions and for the circulation, to be easy to put on and take off. Such is a good shoe."

Dr. Champouillon is, if possible, more exacting. He expresses himself thus:

"All tactics are in the legs; but it is not sufficient that the warrior be shod so as to execute freely all the commands given; it is necessary for his feet to be protected against certain surrounding modifying circumstances, such as cold, and especially damp cold. It is important, then, that the military shoe be at once strong, supple, and light, easy to put on and take off; equally fitted for all climates and all seasons; manufactured in such a manner as to keep the foot dry and healthy, thwarting the play of none of the various articulations; preventing the entrance of sand or mud; and, finally, from an economical point of view, it is required that it should cost little and last long.

It does not seem as if so many equally necessary conditions could ever be realized. That is, however, the task we have imposed upon ourselves in spite of the surprises met we have with in ascertaining how difficult it is to shoe each soldier comfortably.

The models of buskins and shoes which we present to the different Governments should fulfill the conditions and realize the preceding advantages. To become convinced of this, it is only necessary to make a *comparative trial, during one month, in a single regiment*, fifty men wearing buskin No. 1, fifty men wearing buskin No. 2 (which, in heavy rains, snow, or high grass can, without any difficulty, be transformed into a pair of boots by means of a pair of leggins with which they are accompanied), and fifty men wearing the shoe. But as this trial aims at important practical, conclusive, and definite results, we ask:

1st. That we be permitted to furnish the samples for the trial.

2d. That the trials be directed during the whole time by a special physician.

It is in fact a physician who, above all others, should pronounce upon the anatomical principles which have served as a basis in the manufacture of the models which will be used in experimenting. This health officer shall choose for the test those men whose feet are the most injured and disfigured by the shoe. He shall make a statement in which he shall indicate exactly what was the state of their feet at the beginning of the trial; he shall also mention in it, from day to day, and on the return of the troops, the remarks which the soldier will not fail to make, and finally the result of those observations which the physician himself makes.

At the close of the trial the shoes will be taken back, and it shall be shown again in the same statement exactly in what state the men's feet are found, and also the condition in which the shoes themselves are found.

Let the test be made under these conditions, and for the first time a result will be obtained which will render all further experiments useless; for it will only remain to adopt everywhere the style of shoe that we have the honor to present.

For the first time, also, this result will close the mouths of those who are always ready to assert that new experiments ordered signify nothing; that their result is foreseen in advance, &c.

Finally, we refer it, in all confidence, to the physician who shall direct the trial, and leave to him the task of drawing conclusions; and if, as we do not doubt, the fact is established that our models have rendered good service to the army, we shall leave it to the higher military authority to value the results, and to give us credit in a measure for the advantages that the army ought to derive from them.

CHAPTER I.

THE OBJECT OF THE SHOE IN GENERAL—FASHION.

We wear a shoe for the same reason that we wear clothes; that is to say, to protect our lower extremities from the asperities of the ground and from wet and cold. To protect it from the asperities of the ground the sandal alone is sufficient.

The sandal is a strong sole of wood or leather, fastened upon the foot by means of leathern straps or cords, so as to completely cover the bottom of the foot.

When it becomes necessary to protect the feet from wet and cold, the foot and lower part of the leg are inclosed in various gear, cloth, stockings, socks, &c., and the whole generally covered again with flexible leather. This leather covering is called the upper leather. By joining the upper leather to the sole and forming one single whole, we have the advantage of fixing the shoe on the foot without the aid of the leathern straps or cords. This union of the upper leather with the sole has produced the shoe, the boot, &c. The shoe thus has been made to protect the feet against the asperities of the ground, against wet and cold.

This is the only duty which it has to perform, but it does not discharge this duty without giving place to numerous inconveniences, since it is tributary to fashion, which also interferes in all questions concerning our clothing.

Now, thanks to fashion, we contend that the feet of the entire human race are deformed by the absurd shape of the shoe which has always been worn, and especially that which is worn at the present time. This distortion commences in infancy, but it is not noticed, because one does not reflect that when the foot is first placed in a shoe, if the shape of the shoe is not the same as that of the foot, the foot being the more flexible, necessarily adapts itself to the shape of the shoe. This unhappily has always taken place; for we shall have no trouble in showing that the actual shape of the shoe, whether for infancy or mature age, has no actual relation to the anatomical construction of the foot.

In civil life this inconvenience is scarcely noticeable, because one walks little, sits at his ease in making any journey whatever, and especially because one is not laden.

In military life this does not happen; a soldier must march great distances and carry everything with him. To arrive, and especially to arrive *in time;* to accomplish wonders in a campaign; not to be appalled by the distance between halting places; to endure fatigue cheerfully; to be always alert, active, and ready to respond to the orders of the chief, the feet must be in good condition.

This is the opposite of what has been stated to be a fact at all times, and more or less in all countries; so we know what the result is. A troop badly shod is, as a rule, crippled, and after a few days' march counts, at the beginning of the campaign, 25 or 30 per cent. of the men with wounded feet; of whom 10 per cent. will claim place in the ambulances and the care of the surgeon of the regiment.

Dr. Tourainne, who is the author of this remark, has certainly had occasion more than once since 1856 to prove this. Now, if it be true of the French army, it evidently must be so, of course, for any other army.

To be well shod the foot must enjoy perfect freedom; *it must be able to spread itself out in every way in the shoe,* says Dr. Tourainne; in other words, the shoe must be made for the foot, and must have the same shape as the foot.

We will first examine into the form of the foot.

CHAPTER II.

THE STRUCTURE AND PHYSIOLOGY OF THE FOOT.

The foot is very skillfully composed of twenty-six bones, more or less movable, joined together by a score and a half of joints. They are strongly confined by the ligaments, and the movements are determined by the action of twenty muscles. Fourteen of these bones belong to the toes, the other twelve form the sole and the metatarsus of the foot.

The bones of the metatarsus are the five long bones (*a*), to which are fastened the toes (*c*) or phalanges of the foot; the seven others are the bones of the sole of the foot or of the instep (*d*). One of the latter, the ankle bone (*b*), supports the leg, which, by its two apophyses, incloses it on both sides.

If we examine the middle part of the foot we see that it presents a cavity or bony vault, a kind of elastic arch, which has its two points of support upon the foremost extremity of the metatarsal bones, principally upon the great toe or first metatarsal bone (*a*), and upon the calcaneum (*b*) or heel bone. The keystone is formed by the ankle bone (*c*). The calcaneum, which is the largest of all these bones, forms the heel, which supports the greater part of the weight of the body.

The bony arch formed by the arrangement of these bones is more or less developed, which renders the foot more or less arched. This arch is not inflexible, but is held in place by strong ligaments passing through the concavity, and going from one bone to another. All the bones of the foot are thus joined together, and prevent the arch of the foot from giving way under the weight of the body. As long as we remain standing, or when walking, the cavity bends slightly under the weight of the body by means of the articulation *d* of Fig. 2; but it takes its natural curve again as soon as the foot is raised. This is the same motion which takes place in walking every time

that, by muscular contraction, we raise the foot from the ground. In this movement the *point of support* is on a level with the foremost extremity of the metatarsal bones, which rest upon the ground; the *point of resistance* made by the weight of the body is on a level with the joint of the instep, while *the force* is fixed behind this joint, on the calcaneum, by the tendon Achilles, which the muscles of the calf of the leg bring into action.

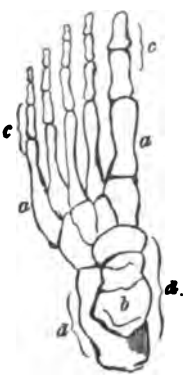

Fig. 1.

The toes are placed in front of the metatarsal bones, to which they are fastened by ligaments. The small toes have two joints, while the great toe has only one. The great toe is the most important of all, and is the strongest and largest; in walking it fulfills the following functions: When we raise the foot from the ground to bring it forward, we raise first the heel, when the weight of the body falls upon the great toe, in raising which, in its turn, from the ground we are thrown forward, still pressing the ground with the end of the great toe. To execute this movement the great toe must be placed in the shoe in such a manner *that it can stretch itself out directly forward*, for in its normal condition it is found upon the prolongation of the longitudinal axis of the first metatarsus. In other words, as is seen by Figs. 3 and 4, *the continuation of the axis of the great toe is upon a line which passes through the center of the heel of all feet not deformed.*

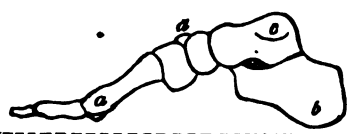

Fig. 2.

This demonstration is purely anatomical and scientific; we give it as we have seen it described in works upon the anatomy of the human body, to the study of which we have devoted ourselves, and it is besides clearly seen from Fig. 1 given above.

Alas! will it be believed? A superior commission, in which, it is true, no surgeon took part, found that this anatomical principle was disputable, and that a line passing through the axis of the *second* toe could also correspond to the center of the heel. This assertion, little flattering to science, might be understood, strictly speaking, if the commission of which we speak had not had under their eyes Fig. 1, and consequently the means of verifying the gravity of the error which they committed.

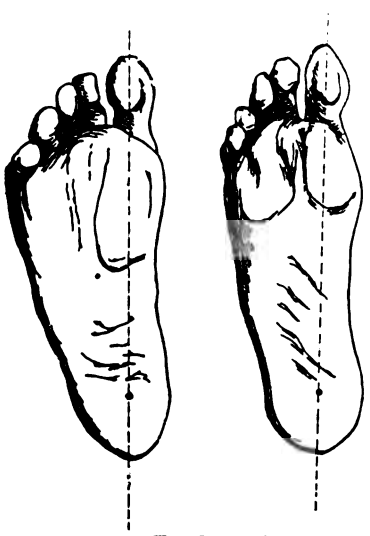

Fig. 3 and 4.

As to skeptics and scoffers in these matters, if they retain the least doubt in regard to this demonstration, we shall have no trouble in proving to them the perfect exactness of it, and will also furnish them the means of convincing themselves of it.

Let us regard the foot of a new-born infant; let us look upon the foot of a child who has never worn shoes; let us look at the foot of a young rustic who goes bare-foot; let us examine the impress he makes in the dust or in the soft ground, and we shall always see that the great toe, *straight with the inside of the foot, is separated from the others;* that the impress of the foot is similar in every respect to that of Figs. 3 and 4; that the little toes are perfectly straight, and that they are spread farther apart by the pressure of the body. It will be seen, also, that in placing two similar feet side by side the great toes will touch each other to their very ends.

When we examine the feet of a grown man, we shall see by placing them side by side—

That the two great toes do not touch each other, the separation beginning at their roots.

That they form an open triangle, explained by the deformation undergone both by the great toes themselves and the nails with which they are provided.

That the small toes are misshapen in their turn; that they are thrown back and pressed against or upon each other.

That the nails of the great toes have grown more or less into the flesh.

That those of the four other toes have turned back upon themselves, imbedded in the flesh, or no longer exist.

Finally, the five toes are, one or the other, affected with corns, bunions, callosities or soft corns, possessions as painful as unnecessary.

It is necessary to explain the position and functions of *the great toe in its normal condition*, for that is the principal point we must take into consideration in order to understand the inconveniences which result when this organ has been deformed by the shoe.

As to the little toes, they are far from being useless. For, if one is standing, they rest upon the ground and sustain the outer side of the foot, especially by the posterior extremity of the fifth metatarsus, a bone corresponding to the little toe, which it supports, and to which is sometimes given the name of anterior heel. In walking, the small toes are thrown back, press strongly against the ground, and sustain the outer side of the foot. The first joint is strongly constructed whilst the second forms a concavity, which make the small toes appear as if pressed in the ground.

Such is the normal structure of the foot, and such are the functions which it has to perform.

To complete this purely anatomical description, let us add that the foot forms a whole at once supple and strong; supple in the forward part, and particularly strong and massive in the hinder part. Around the skeleton are found muscles, tendons, nerves, arteries, and veins; all these organs are near the surface on the instep, where they are more frequently subject to painful pressure, since the skin in this region is fine and there is no fat. The soldier is much more subject to this compression than any one else; because, since the subcutaneous veins are much developed in those who labor standing, they are still more so with the soldier, as no one remains so long upon his feet as he. On the under part of the foot the tendons, nerves, and veins are deeply imbedded in the integuments and protected by a thick bed of soft substances of fat and tissue, which form an elastic cushion, an efficient protection. Most of the veins are collected about the malleolus (ankle bone), so if there be a pressure there the circulation of the blood will be stopped or slackened, and a swelling of the foot will be the result.

Let us now examine the construction of the shoe in use; it will enable us to show that this shoe has not only always compressed the foot by preventing it from executing the movements which we have described, but that it has had no other result than that of disfiguring it, after having made each one undergo a variety of suffering to bring about such a result.

CHAPTER III.

CONSTRUCTION OF THE FASHIONABLE SHOE—ITS DISADVANTAGES.

Shoes are usually made upon *two lasts*, one for the right foot and the other for the left. These lasts are *symmetrical*, and as long as they are in existence there is no use in thinking to obtain a *common-sense* shoe; that is, one that conforms to the shape of the foot; for it would be impossible to manufacture one with lasts which are not so formed.

Let us look at the shape of the sole cut after one of these symmetrical lasts (Fig. 5). We see that on a sole of this cut the continuation of the axis of the great toe is found upon the line *c–d*, coming out beyond the shoe instead of passing through the center of the heel. This sole being joined to the upper leather, Fig. 6 shows the position which the foot will have to take in the shoe. It cannot be otherwise; for the great toe is forced to throw itself into the middle of the shoe, because *there is no room for it elsewhere*. In this position it presses the smaller toes outward in an oblique direction, and obliges them to furnish it a place which the shoe does not contain. No more does the shoe contain the space which the other four toes demand; so that they are pushed in by the upper leather of the shoe and obliged to overlap each other. This Fig. 6 is besides instructive. Indeed, if we examine it closely, we will scarcely believe that it is not exaggerated, and that the foot can really lie in a shoe of which that represents the sole. However, such is the case, for it must be remembered that a similar shoe has been worn *from infancy*. Now, the feet of children being delicate and more flexible than the shoes they wear, necessarily adapt themselves to the form of the shoes whatever it may be. Since the shoe of infancy is as submissive to the ca-

prices of fashion as that of mature age, it provokes a first deformity, which remains an acquired fact, and which can only be aggravated if, as is the case at the present time, one continues to wear a shoe so ridiculously pointed that the foot cannot move in it. The immediate consequence of this state of things is shown by the three following figures.

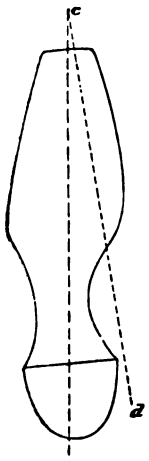

Fig. 5.

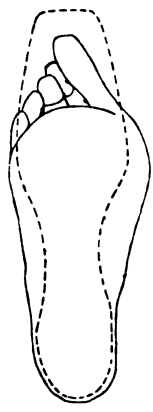
Fig. 6.

It is seen at once that the toes of the three feet are pressed and tapered to a point by the sides of the upper leather, and that it is where the foot is larger, at the root of the toes, that the pressure produces the greatest effect. The foot thus undergoes a very grave deformation, for the right angle triangle in which the toes are inclosed is transformed into an acute angle triangle, in which the toes are forced to find any place which they can, happy if they can remain side by side when the foot is in the shoe. But even this is not the case with the three feet which our figures represent. Indeed, the soles and toes of these feet are totally deformed by the pressure of the shoe; the second toe is always much pushed up, even so that it cannot be seen; in some cases it is entirely folded under.

As to the great toe, we see the place it occupies, and understand the pressure which it exercises on the others; we have seen a foot where the great toe had been so thrust aside by the shoe that it had crept under the smaller toes and there remained anchylosed.

Three principal causes have tended to the deformation of these feet:

The first *unique and chief cause* springs from the form of the shoe, an absurd shape for which we are indebted to fashion, and to which we will not return.

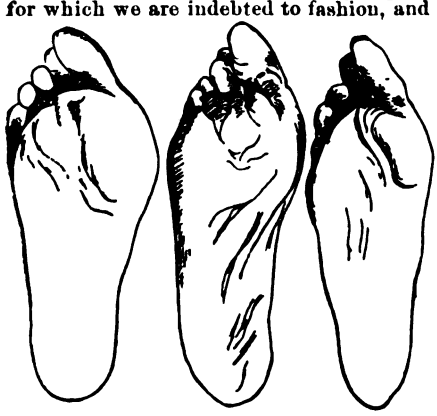
Fig. 7, 8 and 9.

The second is due to the usual manner of taking the measure of the length of the foot, and the third, like the second, from the manner of taking the measure of the width of the foot. These measures are taken with the person sitting down.

Now, this is a great mistake, for the foot measured in this way has neither its actual length nor breadth. Indeed, when one is standing or walking, the *weight of the body* increases the foot in length and breadth about two centimeters, at least one-tenth, whilst the manufacturer only calculates for from one-twentieth to one twenty-fourth, when he takes the trouble to make any calculation.

The shoe made from measures taken in this manner corresponds neither to the normal shape, the size, nor the actual dimensions of the sole of the foot; it is too short and too tight; the foot cannot stretch itself out in length or width; it can execute no movement in the shoe, and, under these circumstances, what will become of the thirty articulations with which it is supplied, and with which nature has endowed it, that it may make use of them—that is to say if the shoe permit them to have regular play?

The intolerable situation which we have described is a material, brutal fact.

Let us investigate, now, the consequences which result again, if we *march* under these conditions.

The foot necessarily executes a certain number of movements in the shoe when one is walking. But we have just seen that the foot and the toes are condemned to a permanent immobility in the present shoe, and that they are thus reduced to the state of an inert, compact mass, incapable of executing the least movement. Besides that, we observe the overlapping of the toes, pushed back and taking an oblique direction. The great toe being longer, the deformity begins with it. The toes converge towards the axis of the foot, and are disposed of in two rows, one row back and one towards the sole. This arrangement is not always the same; in a number of cases the upper row is composed of the second and fourth toes; in other cases of the great toe and the fifth toe; the toes of the lower row are always pushed together and compressed by those of the upper row.

It is to the constraint of the articular movements that we must attribute that peculiar affection called *la tarsalgie douloureuse des adolescents*. This malady is caused, says

Professor Gosselin, by the multiplied inflammations of the joints, which are met with only among young subjects, and it happens only to those youths whose feet are tortured in their development by shoes which are too tight and too short.

Now, from the constriction of the flesh by the leather of the shoe, there result also local injuries and inflammations, more or less acute, of which we cite among other the following: We find upon the top of the first metatarsus at the base of the great toe, curving outwards, what is called a bunion; it is a thickening of the skin, with a little watery pocket developed in the cellular tissue underneath and lying upon the internal lateral ligament of the joint; often the bunion becomes inflamed, and pus accumulates in the watery bag, which little cavity it is then necessary to open.

We might also mention corns, blisters, and ulcers which are seated on the heel and upon the sole of the foot, folded and compressed by the shoe, and also often upon the top of the toes. When the shoe is too short, or the heel too high, the ends of the toes are thrust against the shoe, become bruised, and often large blood-blisters make their appearance under the nails, which after some weeks drop off.

Such is the balance-sheet of the miseries attributed by science to the faults of the shoe. The list is not, however, as complete as might seem at the first glance.

It is still necessary to furnish proof that, with the present method of taking the measure for the width of the shoe, it is not possible for the shoe to be of the same size as the foot.

If we examine the foot shod with the present shoe, we shall see that the upper leather juts out on both sides of the sole; that it is pushed out on the outside by the foot and on the inner side by the jutting out of the great toe.

The too prominent projection of the root of the great toe only, shows that it is pushed out by the tightness of the shoe. Now, the tighter the shoe the more the great toe will be thrust out of place, and will compress the small toes, the roots of whichwill force that of the great toe to project on the inside of the foot.

One final consideration will show still better the gravity of the ills that we have pointed out.

The confinement of the feet in shoes that are too short and too tight has a well-known injurious influence upon the health. It has an unhappy action upon the mind, in that it diminishes the intellectual impulse and drives away good humor. With shoes ill-made and too small, the soldier, in marching, experiences a feeling of heat, and a pressure more painful, since the foot when in use is increased in size by the distenion of these veins. In winter, on the contrary, the feet will quickly become cold in consequence of the constraint and stoppage of the circulation.

To conclude, we will say, with Dr. Tourainne, too tight and too short shoes ought to be severely prohibited; they cause fearful suffering, and one ought to be merciless in regard to them.

Fig. 10.

Another consequence of the deformation of the foot by the shoe is shown by Fig. 10. As we have seen, it is impossible for the skeleton of the foot to remain in its normal condition, for the phalanges of the toes and the bones of the metatarsus have been subjected to the effects of the same deformation of the feet by the shoe.

It would be necessary to wear shoes of a directly opposite form to force the toes to straighten themselves. Even the use of a *common-sense* shoe would not succeed in making them resume entirely their normal position, if at the age of twenty the young soldier's feet were already much deformed.

Fig. 11.

We see, however, by Fig. 11, representing the sole of the foot of a young man of nineteen years, that as a rule the feet of young persons of that age are not yet much deformed. The toes of this foot have already undergone a slight deviation; the great toe towards the outside of the foot and the small ones towards the inside. The first cause of the deformation exists, and it would only become aggravated if the young soldier continued to wear a shoe of the same form as that to which he is indebted for the first deformation of his feet.

If, on the contrary, at the age of twenty years he wear a *common-sense* shoe he is certain to see his toes resume, little by little, their normal position.

Finally, the foot is still exposed to two other afflictions, which are again only the consequences of the faults of the present shoe. The first, which is most frequent, is the penetration into the flesh of the nail of the great toe, or *the ingrowing nail.* It has become a real infirmity towards which we cannot draw too much attention. The great toe undergoes the strong pressure exercised by the shoe, but as it is provided with a very strong and very resistant nail the struggle is so much the longer and more obstinate. By continuing to wear a shoe of the same shape, the skin around the nail of the great toe is hardened under the pressure of the shoe and of the second toe, and is raised around the nail so that it is

forced to penetrate the flesh. The nail will thus not only be out of place but embedded in the skin, which will become inflamed by the friction which it undergoes in marching, and if the feet are not clean, or are subject to plentiful perspiration, the soldier will soon be in no condition to continue on his way.

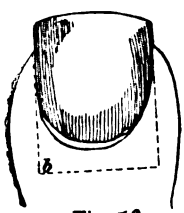

Fig. 12.

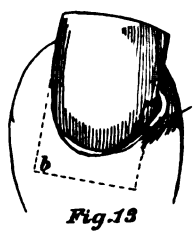

Fig. 13

Fig. 12 represents the great-toe nail in its normal condition, and Fig. 13 the nail ingrowing and pushed out of place. The dotted line *b* shows where the nail is hidden under the skin, and letter *a* the inflamed edge of the skin.

Figs. 14 and 15 represent a vertical section of the two toes.

Fig. 14.

Fig. 15.

We can calculate the miseries resulting from an ingrowing nail, and the sufferings undergone by soldiers afflicted with such an infirmity, when it is added to the inconveniences caused by the other faults of the shoe.

There is no remedy to heal an ingrowing nail; to get rid of it one must have recourse to a long course of medical treatment, and often even to an operation.

The second affliction to which the foot is till exposed, but which, happily, is much less frequent than the ingrowing nail, is he complitcation shown by Fig. 16.

When the pressure of the shoe is exercised for some time on the same parts, deep-seated troubles of nutrition are the results, which affect the bone. This is what is shown upon the joint of the great toe, where we see a bony tumor, or exostosis, which is formed upon the points irritated by a prolonged compression. These tumors are often more extensive than that shown in Fig. 16, and may exist on both feet.

Fig. 16.

Such injuries put a man, otherwise in good health, under the necessity of having recourse to the physician; the treatment is long and painful, and the soldier thus afflicted is only an invalid destined to incumber the ambulances and hospitals, still happy if he comes out of it without being afflicted with an incurable infirmity.

We should be mistaken if we calculated that the faults and inconveniences of the present shoe are limited to those things which we have pointed out. They are, on the contrary, still very numerous, but they come under the details of the manufacture of the shoe; we will, therefore, refrain from enumerating them here, since they will be pointed out with those *which must be avoided* in the manufacture of the military shoe, as has been done in the models which accompany this work.

Fig. 17.

Permit us, before closing this chapter, to reply to an observation which will not fail to be made after having read what precedes.

It will be said: But the shoe actually in use in the different armies is not the fashionable shoe; it is different and larger. That is true, but we will remark that the fashionable shoe is worn to the age when the young soldier is enlisted; in short, that he comes with his feet already *deformed*.

We have in view a double object in publishing this exclusively military work: To introduce into every army a walking shoe fulfilling all the required conditions, and proving at the same time the necessity of wearing a similar shoe from infancy. It is the only means of preventing the deformation of the feet, and, in our opinion, it would be better to prevent a difficulty being created than to be obliged to cure it afterwards.

Finally, the proof that the shoe with the toe of an exaggerated width does not fulfill the desired conditions is shown by the opposite figure.

It is not sufficient to enlarge the end of the shoe for the great toe to preserve its normal position in the shoe, for it will be found upon the line *c d* of Fig. 17, instead of the line *a b*, which is the prolongation of its axis passing through the center of the heel. This line, it is true, passes through the center of the heel of Fig. 17, but we see that at its extremity *a* the space necessary for the great toe does not exist.

CHAPTER IV.

THE COMMON-SENSE MILITARY SHOE.

After what we have said at the beginning of this work upon the normal structure of the foot, and, farther on, of the disadvantages of the present form of the shoe, it will not be difficult to point out on what principles the military shoe ought to be constructed in the future, to fulfill the various conditions that we have a right to require in a walking shoe.

The chief condition of all is, that the great toe preserve its normal position in the shoe.

Nothing being more easy to reach, the immediate advantages which will result from it are, in few words, the following:

The shoe, constructed upon new and different principles, shall correspond exactly to the form and size of the foot; it will facilitate walking by permitting the foot to move about and stretch itself out in it, and will thus insure the regular play of all the joints of the foot without exposing them to any pressure or friction.

The shoe which shall fulfill these conditions can be constructed in two ways; we think we ought to point out both, but at the same time observe that the second is the only one applicable in armies where the shoe is furnished by the Government:

1st. For a shoe to feel right and not hurt, it must be made from exact measures taken of the feet of each customer. The great fault of taking measures with the person seated must be avoided. On the contrary, he must stand upright, with the legs straight, so that under the weight of the body the arch of the foot sinks down and the sole of the foot is obliged to take its true dimensions. But as all feet without exception are more or less deformed, care must be taken to separate the toes, and to bring the great toe back towards the inside of the foot; since the more this organ deviates towards the outside of the foot, the less exact will be the length of the foot, if the measure be taken to the end of the great toe when out of place. This done, we will measure the length of the foot from the back part of the heel to the extremity of the straightened great toe upon a right line, *a b*.

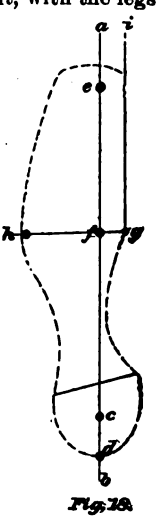

Fig. 19.

We will take, then, the half of the breadth of the heel and by carrying back this measure upon the middle line *a b* thus obtain at *c* the central point of the heel.

A second measure of the length of the foot will then be taken from the end of the *straightened* great toe to the point where the foot begins to be concave—that is to say, at the extreme limit of the projection of the great toe; this length, *e f*, represents about two-fifths of the whole length of the foot; going back to the corresponding point of the line *a b*, we have at *f* the point where the foot is the largest. At this point we draw a line which cuts the middle line *a b* at right angles and obtain in *g h* the greatest breadth of the foot. We will then obtain the inside edge of the great toe by drawing the line *g i* parallel to the middle line *a b*, commencing at the point *g*, which indicates the inside edge of the greatest breadth of the foot. We will then have *d e* representing the *actual length*, and *g h* representing the *actual breadth* of the foot. If these measures are taken exactly as we have indicated, nothing will be easier than to represent the form of the sole of the shoe which must result from them, as seen by the dotted lines drawn around these points in Fig. 18. In other words, this shape will be exactly like that of Fig. 19.

The great toe is found on the line *c d*. This form fulfills all *required conditions*, as there is the necessary space in the shoe for this toe, and the prolongation of its axis passes exactly through the center of the heel.

The line *a b* is, on the contrary, that around which the ordinary sole is traced, and we see the place it occupies on the new sole that we propose.

We can still better consider the difference which exists between the two soles by examining Fig. 20.

The dotted line shows how the common-sense sole differs from the symmetrical sole, and consequently how easy it is to remedy the faults of the latter.

2d. The Army shoe could also be manufactured from measures taken of the feet of each soldier: but we see that this system would be impracticable in armies where the shoe is furnished by the Government.

As a rule the different parts which constitute the military shoe are cut in a uniform manner from certain measures, which must do for all feet.

Nothing hinders the Army shoe from still being manufactured in this manner, provided the shapes and patterns of which they make use in cutting the different parts of the shoe, and the lasts upon which it is made, undergo the changes necessitated by the new form which it is desired to give them.

It is especially very important that the lasts upon which the shoes are made be absolutely like those used in the manufacture of our models, for these lasts differ noticeably from those now in use, in that they present a conformity as exact as possible with the outward form of the human foot. In short, it will be sufficient to compare them with the lasts now in use everywhere to observe the following differences:

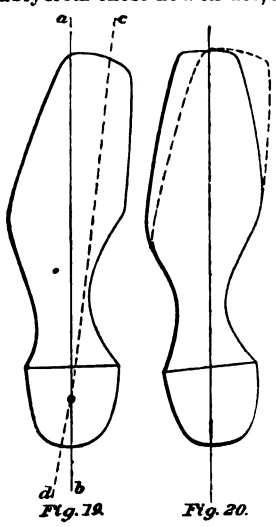

Fig. 19. Fig. 20.

The present lasts are entirely symmetrical. By placing them side by side, we see that they begin to separate from the point of the projection of the great toe; at their extremity the thickness of the wood is entirely insufficient; in short, that *shoes* made upon these lasts *contain* no necessary space *in height* for the great toe.

The culminating point at the extremity of these lasts is in the middle, from which the wood diminishes in thickness on both sides to the rise of the instep. The two posterior sides of the last are cut nearly vertical, so that the shoe does not open out enough for the entrance of the foot and the heel, which are therefore constantly compressed. Finally, the bottom surface of the present last makes no account of the sinuosities which are felt in passing the hand lightly over the sole of the foot. These are all faults which have a direct action upon the construction of the shoe, and which have been completely avoided in the formation of the *new lasts* which have been used in making our model shoes. These lasts have one special advantage which it remains for us to set forth. They have an outline similar to the outline of the inside of the foot, and they are of the same thickness as the foot. The culminating point of the extremity of these lasts is at the inner edge, corresponding to the place occupied by the end of the great toe; from there the wood diminishes in thickness to the point occupied by the little toe. The appearance is far from being ungraceful; it is not perceived when the shoe is on, and it is absolutely necessary that it should be thus. It is indeed by this arrangement of the last that the great toe is able to remain in its normal position. Better still, the great toe, which is *already deformed*, will be obliged little by little, to take again its normal position; for the shape of the shoe will prevent it from continuing to take its place *in the middle* of the shoe. Then there will be no more compression of the small toes by the great toe, and regular play will be secured to all the joints of the foot.

Besides this advantage realized by these new lasts, they present another not less important. They have a bottom surface reproducing the same sinuosities which are felt on the soles of the feet. By passing the hand lightly over them we see that the projection of the great toe is more or less prominent; now the lasts must possess this same prominence, that the corresponding space may be found in the shoe when finished. This space serves for a lodging for the projection of the great toe, which will be no longer compressed in this cavity which has been arranged for it; it will give sufficient space between the sole and the upper leather, and the foot will not widen out and push the upper leather over on both sides of the shoe, as is seen in the shoe where the inner side of the sole is absolutely flat, and where this space cannot then exist.

The models of buskins and shoes which we present fulfill all the conditions that we have just enumerated, and they are, besides, distinguished from all other systems known at the present day in that the *new contrivance*, by means of which they are fixed upon the feet and fastened to the leg, is the only one which allows for the increase and diminution of the size of the foot in marching.

The buskin No. 1 is properly called the walking shoe. It is *à soufflet*, but of a new construction, for it requires neither strap, buckle, nor lace. This shoe is very strong; it is also as light as possible; it reaches high enough to do away with the use of gaiters; it allows the foot freedom in all its movements; it is put on and taken off with the greatest facility; finally, it costs little and will last so much the longer, as it has no struggle to keep up with the foot, being perfectly fitted to it in shape and size. The *soufflet* with which this buskin is provided is a simple garniture of more flexible leather, fixed on the outside around a customary opening in the two vertical seams which join the upper leather at the quarter-piece. This opening, which is from ten to twelve centimeters (3 or 4 inches) long, entirely protects the ankle-bones from pressure or friction, and the garniture which closes it follows every movement of extension, flexion, enlargement, and shortening. The little fastening with which this *soufflet* is provided fulfills a double purpose. It gives a certain elegance to the shoe; it causes the quarter-piece to fit closely behind the ankle-bones after the passage of the foot, and prevents the *soufflet* from becoming misshapen by following the forward and backward movements which take place in walking, and which have the

effect of forcing the leg of the shoe, and the *soufflet* itself, forward and back at each step. If it is closed, the *soufflet* does not get out of shape, and it holds the pantaloons better around the lower part of the leg; but it may be opened if, during great heat, the soldier feels the need of having more freedom either for the movement of the foot or for the circulation of air in the buskin. Moreover, whether it be shut or open, no inconvenience can result, for the buskin is so well made that it fits exactly to the foot and lower part of the leg, and the soldier will never have worn so practical and agreeable a shoe. The two straps of the buskin are placed on the outside, and as the opening must be larger to allow the entrance of the foot than is necessary for the lower part of the leg, nothing is easier than to put the bottoms of the pantaloons inside, whether they be cut straight, like those of the Austro-Hungarian soldier, or whether it is necessary to tie the bottoms of them in order to get them in the leg of the buskin.

Buskin No. 2 presents the same advantages as buskin No. 1, the manner of fastening alone being different. The *soufflet* with which this is furnished is placed upon the front instead of being upon the side, like buskin No. 1. It possesses an instantaneous fastening, which is accomplished by means of brass eyelets and leather string. This model is accompanied by a pair of leggins, which are placed over the leg of the buskin, and are fastened around the leg by means of the same cord as the buskin. In this way the buskin may without any inconvenience be transformed into a pair of boots. This transformation can always be made if it be necessary to protect the troop against cold, snow, or wet, and can be effected with great rapidity.

The *shoe* like No. III is the second shoe, or the shoe for the soldier when resting. It is a simple Neapolitan shoe, furnished with a fastening by *instantaneous lacing*. Three brass eyelet-rings on each strap and a round leather cord eighty centimeters in length (31 inches), crossed in lacing, with the two ends coming out at the top, and the question is solved.

We have met with many trials since we have undertaken to find out the best possible shoe for the army; but we do not regret the trouble we have taken, for we have found at last, in the shoe that we offer, the most practical, convenient, and comfortable shoe that one can wear. This shoe is constructed on the same principles as the buskin, the fastening alone being different, but not less practical, for it adapts itself even more readily, if possible, to the expansion and increase of size of the foot from the effects of walking. The instep is never pressed in this shoe, for the leather lacer, crossed in the eyelets, readily adapts itself to the tension of the foot and yields to the pressure which the shoe would otherwise exercise upon the instep in walking. The leather cord need never be taken out of the eyelet-holes, and there is no danger of its being cut by them, as they are rounded in the inside; it is sufficient to tie the two ends to prevent them from escaping in opening out the shoe, and it holds the shoe to the foot by being fastened on the inside of the leg. These eyelets are fixed in the shoe by the use of two instruments—one to make the holes and the other to adjust the eyelet-rings therein. These nippers and the eyelets are furnished by the house of J. Huet, 118 Turenne street, Paris, a house which has patents in all countries, and to which an award of merit was granted for the excellence of its products at the general shoe exposition, which took place in Switzerland in 1876. This house is now occupied in the manufacture of a new eyelet which can be put in without the aid of nippers. If it succeeds in this, of which we have no doubt, it is certain the eyelet will be more easily put in position, and it will also lessen somewhat the price of the shoe. We only ask that this eyelet be made a little larger than that with which our model shoes are furnished, for then it would be possible to use a larger and stronger leather string, which would last longer.

Finally, the principal advantages of these new styles of shoes are sufficiently characterized by the following considerations:

1st. The new shape that has been given them secures for the foot complete liberty in all its movements; there being no longer any compression to fear, the increase in the size of the foot will be produced less rapidly, perspiration will be less abundant, it will not so soften the skin of the feet, which will thus be less sensitive, and finally, the perspiration will have an outlet to escape by means of the *soufflet*, which, in the two buskins, acts as a ventilator, and in the shoe itself, which is low enough, and of which the style of fastening must necessarily allow a free circulation of air through the shoe, since the string yields to the tension of the foot.

2d. The buskins Nos. 1 and 2 offer some advantages which are not to be disregarded; they completely cover the foot and lower part of the leg; they are entirely closed, and no mud, dust, sand, nor water can penetrate the shoe. The construction is most simple; there is no roughness inside the shoe; all the seams are on the outside, and thus are more easily managed.

3d. A final consideration is that the shoe is as well adapted to walking as either of the buskins; for, with the exception of its manner of fastening by means of a string, its construction is in all respects similar to that of the buskin.

During the heat of summer the soldier would evidently be better in the shoe than

the buskin: he would be more comfortable, would suffer less from heat, and would hold out between far-apart halting places without the risk of losing his high spirits or good temper. If either of the two pairs of shoes is being repaired, the other will be entirely sufficient for the requirements of the service. The only precaution to be taken with this style of shoe is to provide each soldier with an extra string. This string is 80 centimeters (31 inches) in length. We have purposely given it these dimensions, for, supposing it should break in the middle, it would still be long enough to fasten over the instep.

CHAPTER V.

CONSTRUCTION OF THE MILITARY SHOE.

The shapes, the patterns, and the lasts having undergone the changes that we have indicated above, the different parts of the shoe having been cut, it remains to put them together. They ought to be cut in lengths of from 25 to 31 centimeters (9 to 12 inches), interior dimensions, of four different widths. Thus we shall have twenty-eight different measures, which will be sufficient to calculate for the conformation of all the feet we shall be called upon to shoe. These figures can be increased according to the conformation and dimensions of the feet in the different countries. The length measures (25 to 31 centimeters) are not according to regulations in all armies, but we have thought it best to hold them, because they must appear in a regular manufacture, and besides, since the shoemakers wet the leather to work it, we must allow the shoe to dry before issuing it to the troops. Then, in drying it will shrink very much if it be not the object of skillful care during its storage in the depots.

We will come again to the subject of the care and preservation of the shoe in Chapter VIII of this work.

The construction of the shoe, that is, the putting together of the different pieces and joining the sole to the upper leather, is accomplished by three different means—the work is sewed, screwed, and pegged. The sewing is either done by hand or by machine, and the pegging is done with wooden pegs or nails. Until the strength and durability of the machine-sewing, as well as the possibility of repairing it, are well established, we give the preference without hesitation to the hand-sewing.

The work sewed by hand is always more flexible and adapts itself more readily to the movements of the foot in the shoe. The sewing should be done with a strong thread, well waxed, to escape the solutive action of water and dampness. Shoes made in this way will always be preferred on account of their durability, the facility with which they can be repaired, and for their suppleness and strength. But care must be taken that the size of the thread corresponds exactly with the hole made by the awl. The thread must be very strong and well waxed, and only a small awl must be used. It is true, considerable effort will be required to pull the thread through; it will be fatiguing and perhaps discouraging; but every other method is adverse to the strength of the shoe.

The screwed work has only one advantage over the hand-sewing; it is more quickly done and costs less. But if a shoe strongly screwed lasts as long as one strongly sewed by hand, which we hesitate to assert, it presents, on the other hand, disadvantages numerous enough to make it impossible for us to recommend it.

The screwed shoes were invented in America in 1808; they have been tried in most countries, especially in France, in 1815, 1849, and 1868. The results obtained were not favorable to them, for it was proved that they did not wear as long as others and did not admit of repairs; besides, the screws projected into the inside of the shoe, and were always pushing up; for, pressed on one side by the ground and the other by the foot, they penetrated the flesh, which offered the least resistance; finally, during the march they enlarged the holes in which they were fixed, and ended by falling out and leaving an opening for the entrance of dampness.

The shoe *pegged*, either with wood or nails, absolutely presents only faults. We must make the same objections as to the screwed shoe, with this aggravating circumstance, that there are more pegs than screws. The pegs fall out more easily than screws; the shoe cannot be repaired; and, finally, a most serious consequence, if the shoe be not the object of continual and very skillful care in the depots, it will dry up, and the pegs will no longer hold in their places, and the soles fastened in this manner will have only the appearance of solidity, and we can perfectly understand the misfortune that might befall a soldier who had pegged shoes issued to him from one of the depots—that of having the sole come entirely off by hastily thrusting his foot into it!

Pegged and screwed shoes have another fault. In a shoe firmly sewed by hand the upper leather is sewed to the sole by means of the welt. In the screwed or pegged *shoe the* sole is joined directly to the upper leather by the screws and pegs themselves.

The shoe is often furnished with an inner sole, which usually is simply glued into the shoe. This sole is often very thin or of bad quality. Then, if it be simply glued to the shoe, it becomes detached under the influence of heat and perspiration; if it be not detached it forms wrinkles which wound the foot. Whether we remove it or not—whether it be glued, pegged, or screwed—the result will be the same; the ends of the pegs or screws will project into the inside of the shoe, and instead of a smooth surface the foot will rest upon a collection of asperities. And how could it be otherwise? Every one knows that the screws and wooden pegs or nails are sharp at the end, that these points easily penetrate the flesh, and that they will be forced into it by the pressure of the ground on one side and the foot on the other.

The wooden pegs, which are used in setting up the shoe sewed by hand, have also their disadvantages, but it would be dangerous to order them replaced by nails, for if it should be forgotten to remove them when the shoe is finished it could not be worn. Of two evils we must choose the least—to tolerate wooden pegs for setting up the shoe, but to require that they be reduced to the smallest number possible, and that they be carefully shaved down, for otherwise they will protrude and cause blisters or abrasions, painful and difficult to heal during the march.

It would be well, without doubt, as a means of avoiding the inconveniences of which we have just spoken, to have a shoe well made, and place in it an inner sole of leather, not too thin, but very smooth. This sole would fulfill another end, which we will explain in the chapter "Conclusions" of the present work.

In the manufacture of the shoe another fault is committed, of which the consequences are deplorable to the soldier.

The different parts of the shoe are usually cut without taking into consideration the grain or fiber of the leather. Now, it must not be forgotton that a skin varies in the direction of the grain, and that it is far from being of no consequence whether it be cut lengthwise or crosswise. The skins of animals are composed of curved surfaces, more or less straightened by the effects of a defective or insufficient tanning; now, they return to the natural and primitive form as soon as they come under the influence of dampness, and the following are the immediate consequences which result therefrom: Some upper leathers stretch, others shrink, and the quarter pieces curl up, all of which produce numerous excoriations upon the sides of the foot, on the heel, and below the ankle bones. It is necessary, then, to look to the quality and good construction of the shoe, and to be less concerned about the *number* of upper leathers, soles, and heels that can be secured from the skin of one animal. But if the shoe manufactured under these conditions cost more, it will also last longer.

SEAMS.—It is imperative that all the seams of a shoe be made on the outside, otherwise the foot, rubbing against an inside seam, is necessarily wounded, *no matter what kind of a shoe it may be.* This observation is of rudimental simplicity.

AILETTE.—This is the name which is given to a piece of leather placed in the inside of the shoe to strengthen the part which receives the most wear, and which is particularly weak or of bad quality. For example, if the upper leather has been cut from the extreme flank of the skin, or from too thin a skin, it will certainly not withstand the pressure to which it must be subjected. This is why it is generally provided with a piece which is let in between the two soles and sewed to the inside of the upper leather on the outer side, if it does not entirely line it. This seam is perfectly felt with the hand. If, as in our models, shoes had always been furnished with soles of the same size as the sole of the foot, it would not have been necessary to line the upper leather to strengthen it against the continual pressure made upon it by the foot. However that may be, and in spite of this resistance, we see the upper leather project over the sole when the shoe is worn, and if the heel is worn down on the outer side the upper-leather will project to such an extent that it will end by being trod upon in continuing to wear the shoe. Under such circumstances the seam of the *ailette* rubs on the outside of the foot until injuries result. All inconveniences of this kind would be avoided by cutting the upper leathers of the military shoe from skins weighing from 4 to 5 kilograms (8 to 11 pounds). Moreover, the proof that the disadvantages of the *ailette* and inside seams generally are well understood is that they are prohibited in the manufacture of the military shoe of most countries.

CUT OF THE UPPER LEATHER.—We will also draw attention to a fault which, thanks to the conspicuousness of the outrage, has never appeared in the manufacture of the military shoe, but which, on the contrary, did exist, and probably does at the present day, in the construction of the civil shoe. It happens frequently that the upper leather is cut by the shoemaker just above the edge of the sole on both sides. It is an *accident*, which is caused in the following manner: In removing the inequalities at the edge of the welt and the sole, with a paring-knife, or a cutting tool called a *fer à bavures*, the workman, not being careful, cuts at the same time, but without knowing it, the leather of the uppers adjoining the edge of the sole. If the cut be not made with these tools, there is danger of its being made with the *fer d'emboitage*, another implement which shoemakers use *hot* to smooth and polish the edge of the sole. But as the heated edge of this implement glides along during the operation, the greatest

precaution must be taken not to cut or burn the upper leather, especially when it is joined to the extreme edge of the sole, where the necessary space for passing the instrument does not exist.

There are still many shoes of which the upper leather is cut or burned in the same manner. Thus it is evident that the pressure exercised by the foot on both sides of the upper leather need not be very great to make the leather burst out at the incision or burned place, and so necessitate the mending of the shoe.

LENGTH OF THE SOLE.—Whenever a country is required to make any important provisions hastily, we must expect to find the hand of fraud in the supplies. We do not speak of the shoe provided with *pasteboard* soles, a scandalous fraud which has been attempted several different times in the French army, but of the shoe of which the outer sole extends only to the heel, instead of being a single piece the whole length of the shoe without piecing under the heel. If the outer sole comes only to the heel, we can understand the benefits that a shoemaker receives in saving his leather; but look, on the other side, at the inconveniences that result to the soldier and the man who wears them. The sole that extends only to the heel is made thin at the end, and is simply placed between two pieces of leather joined under the heel. Then, if the heel be too high or too narrow, the shoe will *run down* between the heel and the sole, and that is the place where the greatest effort of the leg bears upon the foot. But a greater fault than the running down of the shoe is that to which must be attributed the existence of *flat feet*.

A shoe provided with too narrow or too high a heel will not support the arch of the foot; if that be not supported, and one continues to wear a shoe of which the heel tends to displace the point of support of the leg, there is but one result: The arch of the foot will give way under the weight of the body, will sink down more and more towards the ground, until finally it will become completely flat.

The origin or cause of flat feet has been long sought for, and has not yet been settled upon. If this one that we have just pointed out is not the only cause to which we can attribute this infirmity, it must necessarily contribute towards it. The means of avoiding it are very simple. We must require the sole to be of a single piece, of the whole length of the shoe, and the heel long enough, that is to say, one-quarter the whole length of the shoe.

THICKNESS OF THE SOLE.—This question is one of the most important of which we have to treat. Thus, after having studied it thoroughly, we shall not be surprised if the conclusions to which we have arrived meet with incredulity. These conclusions are justified by an experience of many years, so that we have the right to hold strictly to them.

The sole plays an important part in the shoe of the army. It ought to be easy, impervious to dampness, and to have a certain thickness to guarantee the strength and durability of the shoe; but it ought to be forbidden to split the leather, so that it would be impossible to provide the shoe with a sole of which one of the surfaces is spongy and permeable to dampness.

The quality of the shoe depends upon the quality of the leather, and the quality of the leather upon the kind of skins and upon the processes employed in tanning them. The skins designed for shoes come from animals slaughtered for the butcher's shop, from those killed by accident or disease, and from animals sacrificed at the time of the epizootic. This difference of origin is not without importance, for, according to their origin, the skins differ more or less in their texture, and endure more or less successfully the operation of tanning.

We have not searched deeply enough into the question of tanning to enter into many details in regard to it. We will confine ourselves to saying that well-prepared leather of good quality may be known, when it presents a glossy cut; when its texture is close and compact; when its color is like that of the inside of a nutmeg; and when in letting a drop of water fall upon the side, the drop retains a globular form. Inflexible leather, sonorous and brittle, is bad; it comes from imperfectly tanned skins.

Russian leather is the most impervious. It owes this quality to the empyreumatic oil of birch bark. It is made red by steeping it in a decoction of sandal wood. Russia leather never gets moldy, and no insects trouble it on account of its odor. Finally, if we leave a side of Russia leather soaking in water for some hours, and one of any other country, we shall find in weighing them again that the Russia leather has absorbed only one-third as much water as the other leather, which sufficiently shows the inferior preparation of the latter.

We have said that the soles ought to have a *certain thickness;* if they be too thick they impede the walk by their stiffness, and *neutralize* the play of the joints of the foot; and if the leather be too dry and too compact it soon cuts the thread of the seam. The thread of the seam can also be destroyed by greasing the shoe with animal fat (lard). This question is treated further on, in Chapter VIII.

As to the *thickness of the sole*, most countries fix the *weight* of the sides or bands of leather from which the soles must be cut. But that in only a half measure; for a

heavy leather can be less thick than a light one. It depends, in fact, upon the food and previous condition of the animals, and especially upon the length of the process of tanning and the preparation of the leather. If, for example, the animals receive not very substantial food, the skin will always be thin, while it will be much thicker if they are fattened on bran, meal, potatoes, &c. The best meal is that made from Turkish corn, but it ought to be eaten *dry* by the cattle. Thus we see that it is not sufficient to prescribe the *weight* of the sides of leather from which the soles must be cut, but it is much more important to require a certain thickness for them. This thickness can only be obtained by a good condition of tanning. Formerly the process of tanning lasted two or three years. Thus we had an excellent quality of goods; for the tannin, combined with the gelatine of the skin, increased the weight and thickness of the leather about one-third. At the present time the competition is such that they tan quickly rather than well, and even have recourse to an artificial tanning which only takes a few days; so that it is difficult to obtain an impervious shoe.

Leather tanned by processes of this kind is that which is used, with rare exception, for the shoe of customers in civil life. But in order to make the soles appear more solid and thicker than they really are, the shoemakers put between them all the waste leather possible. Then, as every one knows by experience, when the outer sole becomes worn, all this *débris* falls out. This inner layer of thin fragments of leather does not appear on the outside of the shoe; for the edge of the soles undergoes a preparation which, when the shoe is finished, prevents any one from being sure of the true thickness of the leather. The only means of discovering the fraud is by ripping or taking to pieces the shoe.

The sole of the military shoe ought to be cut with the grain of the leather, and to have a thickness of at least three millimeters after they have been beaten by hand by the workmen.

It makes no difference whether the skins of oxen or cows are used. We will remark, however, that the skins of cows as thick as those of oxen are stronger, because the grain and texture are finer and more compact. However that may be, whatever they use should be well tanned, and have at least three millimeters of thickness, not after the soles have been beaten by *machinery*, as is done in some countries, but after they have been beaten *by hand* by the workman.

Under these conditions only are the soles thick enough to make it unnecessary to use any other filling than that which is required to fill the space existing between the sole and the upper leather caused by the joining of the latter with the welt of the shoe. This filling up is generally done by means of an old sole rendered impervious by use; it extends to the heel, and is fastened between the two soles with some kind of paste, and it is strengthened under the arch with one or two pieces of leather, better old than new. All other filling is useless, and, as we have already said, is of no use but to deceive as to the true thickness of the sole.

NAILS AND PEGS.—We acknowledge at the beginning that nails have undoubtedly the effect of lessening the wear and tear of the sole, and of protecting the seam which comes in contact with the ground. But we also affirm that if the sole be really of good quality, it is useless to furnish it with an armor of nails or pegs, which have the effect of transforming it into a veritable sponge, and causing it to lose its flexibility, one of the most important and necessary of its qualities.

The military shoe has been filled with nails only because the soles were not of good quality. This is contrary to what ought to take place in future, and we shall see that shoes moderately nailed will last as long, and even longer, than those provided with an armor of nails. In any case they will not have the inconveniences of the latter, of which we are about to furnish the proof.

A shoe filled with nails is always heavy and stiff, and costs more. The surface of the nails is never on the same level; furthermore, if there are too many, the heads of the nails are easily knocked off on paved streets or graveled walks, and the nails fall out, one after another, leaving place for the entrance of dirt and wet, so that they must be replaced. If the head of the nail has fallen off, the point remains in the leather, and it must be taken out, or make a hole beside it for another nail. If this is not done, and on a campaign it never is, the point will rust and corrode the leather; the shoe being sewed, water will reach the thread, which will become rotted, and allow dampness to reach the feet, and the shoe itself will soon need repairs, and will become useless long before the expiration of the time we might reasonably expect it to last.

Even in winter a soldier ought never to have cold feet, and consequently no dampness must be permitted to penetrate the shoe. The sole, then, must not only be strong, but impervious. This is absolutely necessary, for there have been cases when soldiers have been found frozen when relieved from guard duty.

Good leather, well tanned, is of itself impervious if it be not plowed with nails. Soles can be made still more impervious by the following process: When the two soles, inner and outer, have been cut in the same proportions, we fasten to the first the welt, the upper leather, and the quarter-pieces, after which we spread over it a

layer of shoemaker's wax melted in a *bain-marie:* the outer sole is, in its turn, spread with a coating of the same wax, and while these two layers are warm the soles are stuck together as exactly as possible. They are thus rendered impervious; but this operation requires the following precautions: The layer of wax must be thin and very uniform; the wax must be neither too hard nor too soft; if too hard it breaks up in cold weather; if too soft it takes the impress of the foot, and if the inner sole be too thin it forms hummocks, which cause bruises, blisters, excoriations, &c.

This question of the imperviousness of the shoe will be treated more in detail in Chapter VIII.

HEELS.—The usefulness of heels should not be forgotten by any one, for they offer many advantages, especially in wet weather. Although *fashion* cannot vary to any great extent the shapes for inclosing the foot, it has, on the contrary, introduced a variety of heels. But we must say, to its shame, that all these shapes are more or less ridiculous.

The very high heel was invented by the ancients. They did not know the use of handbills for plays, so they distinguished their actors who represented the gods and heroes by making them wear shoes with very high heeels and very thick soles. These shoes were called buskins. The women, especially those of small stature, were not long in following this fashion, which, in a short time, became general everywhere.

In the XVIIth century high heels reappeared, and the fashion has continued to the present day The height remains the same, but the cut is more elegant.

The military shoe, happily, has not been so much under the influence of fashion as to be exaggerated in this respect; but it is not yet provided with a truly practical heel, such as it is important to give it.

The French military shoe is the only one, to our knowledge, of which the shape of the heel is good; but that is badly sewed and comes off easily, especially when the men are obliged to hold back the gun-carriages down a steep declivity.

Too high heels have numerous disadvantages, some of which are important enough to be pointed out.

In walking, the foot always has a tendency to push forward in the shoe, and the more the heel is raised the more the foot will push forward.

Too high heels are at the same time too narrow; they thus lack a firm base; further, they displace the point of support of the leg, which, instead of resting upon a horizontal surface, slips forward upon an inclined plane. The weight of the body is thrown in a disproportionate manner upon the toes, and if the heels are worn down on the side, the displacement of the axis of the limb causes the distention of the lateral ligaments of the tibia tarsal joint; certain muscles contract in a permanent and exaggerated manner, and walking becomes fatiguing and painful. The toes are ill-treated in their turn; they hit against the end of the shoe, and are pushed back, and although the shoe may not be too short, they suffer the same inconveniences as though it were. This may especially be stated concerning a shoe provided with an inside sole curved at the end. It is to *fashion* that we are indebted for this invention, of which the only use is to deform the *toes* and abuse the *nails* with which they are provided. They have, in fact, no place to move in the end of the shoe; and as, on the contrary, they find there an absolutely insuperable barrier, nothing more is needed to explain the tortures that result for those who make long marches in such shoes.

To be truly *in the fashion* at the present day, every shoe must be as pointed as possible, and provided with an inner sole curved at the end.

We have already said, in speaking of too short soles, that if they are joined with heels that are too high and too narrow, the shoe will not prevent the foot from resting upon the ground, and thus will cause a flatness of the foot. This is inevitable, especially if the heel be not long enough and does not extend far enough under the foot so as to support the arch of the foot. We repeat that the greatest effort of the leg is borne upon the arch of the foot, and if that is not supported by a large enough heel, the shoe will run down at the heel and the foot will become flattened. If the leather be flexible and moist, it will require little time to accomplish that, while it will take longer if the leather be dry and hard.

On the march, men are fatigued more quickly with shoes having too high and narrow heels, because the foot has no solid base; and so, according to the nature of the ground over which they march, it is necessary to protect themselves from injury on the road, and there results a tension of mind as fatiguing as the march itself.

A good marching shoe, then, ought to have a large heel, long enough and a little raised, which protects the foot against the inequalities of the ground and forms a solid base. A soldier will only be truly solid upon his feet with a shoe which has a large and sufficiently thick sole and a heel equally large and low, cut vertically, with a height not exceeding from fifteen to twenty millimeters at the most. The heel must be kept in place by two seams; a vertical one which passes through it, and an oblique one which joins together the heel, the stiffener, and the quarter-pieces.

IRON ON THE HEEL.—It is unfortunate that opinions are divided upon the usefulness of the iron on the heel, for nothing is more practical than this little iron to prevent

the heel from wearing out on the sides, for maintaining the foot in a perpendicular position, and for avoiding sprains and displacement of the axis of the member, under the strain which the leg places upon the foot.

The iron on the heel prevents the shoe from becoming misshapen; the shoe, never getting out of shape, will wear out less rapidly; the heel remains straight until the iron is worn out, and thus lasts a long time itself. The expense of frequent repairs is considerably diminished, and the result is a true economy, as well for the soldier as for the Government.

In spite of these unquestionable advantages, we have not thought it best to provide our models with iron on the heel, because it is claimed that it causes the soldier to slip on stones and on icy roads. This accusation is not without foundation, but only when the shoe is provided with an iron on the heel absolutely smooth and polished, as is still the case with the military shoe of some countries. On the other hand, it would never apply to the iron that we have invented; for it is to avoid all such inconvenience and danger that the surface of this iron has been grooved in such a manner that, until it is entirely worn out, the soldier will never be in danger of slipping upon any ground whatever.

We have samples of this iron for distribution in all the countries to which we have the honor of presenting our models of shoes; and we add that nothing is more easy than to place the iron upon the heel of these models, for the heel has two rows of pegs in the space between which can be fastened the five screws designed to fix the iron firmly in position. These screws should have the heads copper-plated.

We see only advantage from the military shoe being provided with iron on the heel. The iron costs little; it increases very slightly the weight of the shoe; the soldier can take it off and put it on easily, since he only requires a screw-driver to do it.

The shoe of most of the permanent armies is provided with iron on the heel, but they have not taken pains to give it a rough surface like that of the iron which we have invented.

Finally, the iron on the heel has another end to accomplish. There is no reason why it should not be used upon the shoes of all troops *during summer*.

But, if the army makes a campaign *in winter*, or if the country to which it belongs possesses alpine troops, in order that these troops may be able to move with the greatest freedom and facility in any season or upon any ground, we have perfected the invention of the iron on the heel by the introduction of cramp-iron screws, to take the place of the screws that fasten it to the heel.

These cramp-iron screws are fastened to the heel by means of a special key, and are placed in such a manner that, even upon the steepest and most frozen roads, as well as upon snow and ice, the soldier is in no danger of slipping forward, backward, or sideways.

Besides the iron for the heel, we have a sample of these cramp-iron screws, and the key necessary to place them and to remove them, for presentation to all the countries which shall do us the honor to ask for them.

CHAPTER VI.

INCONVENIENCE AND USELESSNESS OF GAITERS.

Gaiters, of whatever kind they may be, offer absolutely only disadvantages, and serve to increase those of the shoe itself in armies where they are required to complete the shoe.

The *leather* gaiter, which is used in some armies, does not adapt itself well to the shoe; it is too large or too small; rarely fits well, unless by a happy chance. The leather for gaiters is, besides, badly tanned, and becomes very hard if it remains a long time in store; moreover, the foot must serve as a last to shape the gaiter that covers it. It is always at the price of pain, and often of excoriation, that the foot endures this shaping, which lasts several days before being definitely completed.

To adjust the gaiter firmly to the leg, and to hold the shoe, the soldier is obliged to fasten his gaiters by means of foot-straps (which considerably diminishes their length) and by lacings, which, placed vertically, cause their chief pressure upon the instep. Under this pressure the lacing gives way and comes out, and the gaiter no longer binds the instep, but presses the lower part of the leg, and has the effect of impeding the circulation and causing the swelling of the foot. The result is the same if the gaiter press the instep.

Besides, leather gaiters require too much time to lace, and that operation can be performed only in the day-time, or in the light. The result is that, on a campaign, the men do not dare to take off their shoes at night, for fear of not being able to put them on in case of an alarm. Is it thus that the feet are rested? And if they take them off

to escape the compression which they inflict, the men are *hors de combat*, inasmuch as in case of alarm they have no time to put on their gaiters again, and the shoes will not stay on the feet without them.

If the gaiters are not strapped tightly they fall upon the heels; dust, mud, gravel, sand, and water get in between the gaiter and the upper leather and quarter-pieces; they penetrate the shoe, make it very heavy, and cause wounds which necessitate the discontinuance of the march.

Gaiters become absolutely useless if the foot-straps give way. As they are only sewed with ordinary thread, it is easy to understand that by the alternatives of rain and drought, mud and dust, the thread quickly becomes rotten, the foot-straps come off, and the men drag their shoes with difficulty for many hours. The same thing happens during an action if the sewing has not been renewed in time before coming to pieces.

Finally, when the leather gaiter gets wet it becomes thoroughly softened; as soon as he comes in again the soldier hastens to dry it before the fire; the leather contracts, hardens, loses its flexibility, and the next day these will be a new torture to endure to fit it again to the foot.

Canvas gaiters, dry and well fitted on setting out, bind the foot in an intolerable manner, prevent the circulation of air in the shoe, and close all outlet for the perspiration, until walking becomes a veritable torture for the foot soldier.

If, on the other hand, the gaiters are dampened by dew or rain, they keep the feet damp, they shrink, and cannot be loosened except by undoing all the buttons, and if one takes them off they cannot be put on again; finally, they tear and wear out rapidly, and although not high-priced, the care of them is very burdensome, for they need to be often washed and cared for to have them always neat and presentable. As to their foot-straps, they come off as easily as those of the leather gaiter.

We conclude, then, that gaiters only present disadvantages, and that, thanks to our model shoes, we can do away with an expense useless in all respects.

In winter, the only gaiters which can render any service by keeping the feet and legs warm are of cloth, or woolen felt, reaching to the knees, but under the condition of wearing them only in sharp, dry cold weather.

It would be better, without doubt, to be able to do away with them to avoid expense, and to reduce to its minimum the weight of the soldier's burden; but if, on the other hand, the *impedimenta* of the army ought not to be increased, there are certain countries where this measure would be justified by the severity of the climate.

The health of the men is besides a very important consideration, and it is especially in winter that it ought to be the object of the greatest care and of a solicitude well understood by those who are charged with watching over the material well-being of their soldiers.

CHAPTER VII.

LINEN, CLEANLINESS, AND HYGIENE OF THE FEET.

This subject is not one of slight importance to the soldier who wishes to preserve his feet in good condition; only he ought not to be given over to his own resources. On the contrary, the Government must come to his aid in some manner, not only in respect to the linen which he needs for his feet, but also as to the means of keeping the feet, at all seasons, in a perfect state of cleanliness.

LINEN FOR THE FEET.—We must first of all declare that we do not understand why this part of a soldier's clothing has not been the object of greater solicitude in all countries. They appear to have attached no great importance to it; or, what is more probable, they have given way before the expense and difficulties of keeping it in repair.

In Switzerland, regulations prescribe that each soldier shall be constantly furnished with two pairs of stockings or socks. That is so plain that the soldier is never without these two additions to his clothing. One does not understand how soldiers can have their feet bare in their shoes. It is not the same in other armies, which explains the great number of maladies contracted in service, especially in winter. Whether they be furnished by the Government or by the soldier himself, every man ought to be provided with two pairs of cotton socks for summer and two pairs of woolen ones for winter. During summer the socks could, if needful, be replaced by cloth (?) (wrapped about the feet).

Each soldier in the German army is provided with two pairs of woolen (felt) socks for winter. Thus during the siege of Paris, and especially during the month of December, 1870, the cases of freezing the lower extremities were very few in number in the German army, while they were in greater proportion in the French army. We saw numerous cases everywhere in the French army of the east, after its entrance into the Swiss territory in February, 1871.

Dr. A. Doyon, chief of the second Lyonnais ambulance, and who was in Switzerland during the continuance of their detention, had occasion to observe a case of frozen feet which made a great impression on him. He was attending a man whose great toe of the left foot showed on the inner surface a frozen spot about the size of a franc-piece. The scab had just begun to come off, when, without any appreciable cause, he began to exhibit tetanic symptoms, which neither a large dose of chloroform, nor hypodermic injections of morphine, nor dressing the wound with morphine, could avert, and *death soon followed.*

The frost-bitten soldiers who generally presented themselves to the ambulance bore, *upon the inner surface of the two great toes*, perfectly symmetrical scabs, which were nothing less than the effects of cold and the continual pressure exercised by the shoe upon this part of the foot.

It has been stated, besides, that the soldier has no greater enemy than cold; for when he is not in motion, let him allow himself to be overcome by fatigue or sleep, let him combat them by imbibing brandy, and let him fall asleep in the open air, and he is absolutely lost.

Consequently during great cold the sentinels and outposts ought to make it a duty to be constantly in motion, however freezing the wind may be, in order to avoid freezing the lower extremities, and the necessity of suffering amputation of the leg; cases of which Dr. Doyon saw during the campaign of 1870–'71.

To protect the troops as much as possible from the cold to which they are exposed during winter, it would be well to give each corps a certain number of greatcoats or cloaks, well furred and provided with hoods, so that during great cold the men could have them constantly at their disposal. It might be necessary to issue to them a few pairs of boots of the following description, which would render them unquestionable service:

During his expedition to the north pole to discover the northeast passage, Professor Nordenskjöld was obliged to pass the winter in the Bay of Kolutschwinsk, from the 27th of September, 1879, until the 1st of April, 1880. Now, during these six months none of the men had frozen feet, although the temperature sometimes descended to 46° below zero.

The foot-gear worn by these men consisted of a pair of boots made of very strong canvas and furnished with a leather sole upon the inside; this sole was covered with a layer of reeds (*Carex visicaria*); the feet were first encased in woolen stockings, and afterwards wrapped in a piece of *woitok*, a kind of fleecy stuff. All who wore this foot-gear assert that there is nothing better in every respect. In prolonged marches over a country covered with damp snow, these boots were found to be much preferable to leather ones. The latter absorb dampness, become very heavy, and cannot be completely dried during the night. The canvas boots, and the layer of reeds inside them, on the other hand, dry very rapidly. They have another advantage, that when they are wet they are not as heavy as leather ones. These boots are, besides, very hygienic; for the air circulates easily through them, thanks to the vegetable lining with which they are furnished.

We will only remark that the layer of reeds to which the escort of Professor Nordenskjöld had resource could advantageously be replaced by a layer of very even and well-dried straw, for straw has all the necessary qualities; not only does it prevent dampness from penetrating, but *being a bad conductor of heat*, it absolutely shuts up every passage for evaporation from the warmth of the feet. It is well understood, besides, that the boots of which we speak ought to be large enough to be worn over the ordinary shoe of the soldier.

The question of the cost of purchasing socks and keeping them in repair cannot be any serious obstacle to their use in the army; for in 1867 an English manufacturer offered to provide each soldier of the French army with two pairs of very thick cotton socks, of which the price of purchase, of repairing, and returning again, would not be more than 20 centimes (4 cents) a man per month. Fixing six months as the limit of the durability of two pairs of socks, we shall arrive at an annual expense of 2.40 francs (48 cents) per man—a little more than the cost of two days in the hospital, said Dr. Champoillon!

Let us hope, then, that they will not shrink from the slight sacrifice which will result from the introduction of socks into the army, which will be, besides, largely counterbalanced by an important diminution in the cases of illness, which, as a rule, have no other cause than the cold to which the men are exposed during winter.

As to the shape of these socks, it is unnecessary to say that it ought to be similar to that of our model shoes, that is to say, the point ought not to be in the middle of the end, but on the inner side, corresponding to the place occupied by the end of the great toe. The principle is the same as that which governs the construction of our model shoes, and we have sufficiently demonstrated it, so that it appears superfluous to return to it again in this particular case.

Whatever clothing for the feet the soldier may be provided with in the future, it is indispensable that it be kept in the greatest state of cleanliness, especially in sum-

mer. Therefore the soldier ought to wash it every night, certainly in hot weather. By washing it every night it will be very quickly clean as well as quickly dry. If this washing does not take place regularly, the perspiration with which the stocking will be impregnated, and the filth which necessarily results from it, will dry up and become stiff during the night. Without considering the intolerable odor which proceeds from cloth or stockings impregnated with fetid perspiration, and which will simply poison the atmosphere of the place in which he will pass the night, the soldier who has not washed his stockings the previous night will put them on in the same state the next morning or the morning after; but covered with a layer of filth, which will become stiff during the night, they retain the fetid odor of the perspiration, and the soldier subjected in such clothing to another day of marching, of fatigue, and of perspiration, is certain to end by having sore feet.

CLEANLINESS OF THE FEET.—It ought not to be necessary to recommend to a soldier what he should do in this respect; but it is to him that the following counsels are addressed; for we regret to say he has not generally that constant care of his feet of which they ought to be the object.

It is a positive necessity for the soldier to keep his feet clean. It is necessary for his own particular interest and for the interest of all. The feet ought to be still less neglected, since they are shut up in a shoe where perspiration is produced with the greatest facility. Now, if the march or the maneuvers have been long and trying, especially if they have been carried on in time of great heat, the feet become irritated by being compressed in the shoe and exposed to the friction of any inside seams, or simply to the rubbing of the stockings upon the skin. This irritation can only be allayed by regularly bathing the feet. If this care be omitted, if it be not performed regularly, and the march be resumed, the irritation of the skin soon develops into sores or blisters which require the aid of the physician.

All barracks should be provided with toilet-rooms, bath-rooms, or even simple basins for foot-baths, since it is necessary that every soldier bathe his feet night and morning; we go even further, and wish that he were obliged to bathe the whole body from his head to his feet. Living together in the way soldiers do requires the strictest and most constant cleanliness. The soldier, by the nature of his occupations, is liable to soil himself very much; it happens upon the field of action and in marches upon dusty ways, and it is therefore urgent that he perform frequent and bountiful ablutions. Not only will health and vigor of body be found in this manner of caring for himself, but he will avoid the disagreeable odor which betrays itself in the sleeping-room on account of want of cleanliness, he will be protected against the spread of skin diseases, and will acquire habits which he will retain in civil life.

We would also avoid compliments like those which Victor Dupuy published in 1872 in the *Etudes d'hygiène militaire*, in which we have found, among others, the following:

"When under a bright sun we look upon a passing regiment, clean, shining, brilliant, do we ever ask ourselves if the under side corresponds to this beautiful carriage? If the magic wand of a fairy should display all these brilliant soldiers in the costume of our first father, how many illusions would disappear? Yes, it is sad to say that nothing is more filthy than a soldier. It is required that he have clean gloves, well-blacked shoes, well-brushed clothes, but why is it never asked if his feet and hands are washed?

"It is necessary to be present at the entrance of a sick soldier to the hospital to have any idea of the degree of his bodily filth. Thus, physicians find nothing more necessary than to prescribe a bath for all new comers, at least, unless the gravity of the malady positively prevents it."

While hoping and expecting that the just wish expressed above may be realized, we insist that the soldier shall be compelled to bathe his feet morning and night. It is sufficient to wipe them off with a damp cloth, not forgetting to pass it between the toes to remove all the small eruptions that are so easily produced there, and to wipe them dry immediately. These attentions are of the most simple nature, but they must be practiced strictly and regularly, for that is the only condition under which they will have any efficacy. They will be especially appreciated upon a campaign when full baths and foot-baths are banished to the background, if the troops be not entirely deprived of them. In ordinary times general baths ought to be frequently taken. The best time of day to take a bath is without doubt the *morning*, and not the evening, as has been the general custom. We will try to furnish immediate proof of it, especially concerning *foot-baths*.

After a fatiguing march, a day of action, &c., during summer, the first thing a soldier will do, if it is not ordered for all, will be to seek, as soon as possible, a river, a brook, a pond, or any pool whatever, to plunge in his feet. But they are often inflamed and sore in consequence of fatigue and perspiration, and in this state he will immerse them in water more or less cold or frozen. He will find, without doubt, a momentary relief, but the warm blood that circulates abundantly in the lower extremities will be suddenly driven back to the higher organs of the body, and the soldier will be exposed to all the dangers that arise from violently arresting the perspi-

ration in any part of the body whatever. Perspiration of the feet is more or less abundant with every man. It ought to be considered, by those who are affected with it, as an excremental elimination produced by nature. It can be moderated by regularly bathing the feet, but it would be imprudent and very dangerous to suppress it, for we have seen formidable maladies, and death even, follow the suppression of it.

From all points of view, then, it is preferable for troops to bathe in the morning, whether they take a full bath or only a foot-bath. In the morning the blood is quiet, the circulation is normal, therefore there is less danger. As to the water for bathing, it ought to be perfectly clean, and, if possible, it is better to choose still water, or that of a river or brook that runs the least rapidly. The faster it runs, the more the temperature of the water will be affected, especially if it have its source in the mountains in the vicinity of glaciers.

One ought, in every case, to abstain from using the basins of fountains for bathing the feet, for the water should remain clean for watering horses, and for the requirements of the population in the midst of which they are found. Foot-baths would become superfluous if the soldier were required to wash his feet every night and morning.

HYGIENE OF THE FEET.—We believe we ought to point out here a certain number of hygienic rules of which the soldier has never had the least notion, and which will be of the greatest service to him, for he will certainly have more than one occasion to make use of them. In a general manner the feet require the following attentions:

1st. Foot-baths.

2d. Brushing and rubbing with pumice stone those parts of the skin hardened by the friction or the compression of the shoe.

3d. Cutting and cleaning the nails.

4th. Cutting and paring off callosities and corns.

1st. We have spoken so fully upon the necessity of foot-baths that there is no need of returning to the subject.

2d. Brushing and rubbing with pumice stone is an operation that has for its object the prevention of the development of callosities, and even corns, about the heel and the plant of the foot near the toes, where the skin becomes hardened under the pressure of the shoe. As a rule these attentions are not observed by the soldier, and we speak of them for the information of those who shall need to have recourse to them.

3d. Cutting and cleaning the nails are as necessary for the feet as for the hands. The nails ought not to be cut too short, and it is not best to allow them to grow too long. The following important rule should be observed and conformed to: *The nail of the great toe ought to be cut squarely across.* It is the only way of avoiding the ingrowing nail, when the soldier is not yet affected with this infirmity. When the nail begins to penetrate the flesh, one thinks to remedy it, or seeks to prevent it, by cutting or rounding the edges of the nail; but, like the hair, the nails grow more rapidly the oftener they are cut; thus the evil increases; the cut edges, being sharp and uneven, cut the flesh and penetrate it deeply. One is then afflicted with an ingrowing nail, and must have recourse to the services of the surgeon. There is, in every case, a way of putting the ingrowing nail back to its normal condition.

The soldier should keep quiet. He should file the upper side of the nail, on the affected side, until it be thin enough to be taken hold of by a small pair of nippers and turned back in the opposite way from its natural curve. This done, place under the nail a small plate of lead, a few millimeters thick, which must be carefully bent around under the toe. In this way the flesh does not come in contact with the edge of the nail, the pain ceases, and it is only necessary to allow the wound time to heal. Every alternate day the nail should be filed to keep it thin and soft, until the skin, having regained its normal condition, can resist the friction of the nail; after that the lead plate is taken away.

We add, finally, that when a soldier wears the shoe that we have proposed, he runs no risk of being troubled with nails growing into the flesh. We affirm, on the contrary, that even in a case where there is more or less trouble with ingrowing nails, it will be sufficient to wear our style of shoes for a time to see the nails sooner or later come back to their normal condition, without having recourse to any particular attention, and without any medical treatment whatever.

4th. Cutting or scraping callosities and corns is an operation familiar to every one, for among a hundred persons there are at least ninety who are, or have been, afflicted with this infirmity. Its seat is upon the surface of the skin, upon the toe joints, and between the toes themselves.

If the soldier afflicted with corns sees fit to have them taken out by a *skillful* corn doctor the cure is certain; he will be entirely free from them. If he is not convinced of the skillfulness of the doctor, he had better take it upon himself to cut or pare his corns. But he must never cut or pare them until they bleed; then the operation can be performed again every time he feels the need of it. The corns may disappear at length by this treatment and by the use of a shoe that presses no part of the foot, but they must not be of too long standing nor must the shoe be the same as that to which the

soldier is indebted for his corns, since they are produced and developed not only by the pressure exercised upon the feet by shoes that are too tight and hard, but also by the friction of those that are too broad and too large.

We close this chapter by giving some counsel to soldiers who have cold feet. In winter, especially upon sentry duty performed during rain or snow, it is natural enough for the soldier to return to the post with his feet more or less frosted. If they are not damp or wet, it will be sufficient to take rapid exercise to re-establish the circulation and bring back warmth to the feet. Gymnastic exercises, where the legs are chiefly brought in play (as leaping, running), will accomplish the same result. Recourse can also be had to friction (as rough as possible) with a brush, a flannel, or any cloth. A roller of wood may also render the same service, rolling it under the feet until warmth is developed.

The most efficacious means is to immerse the feet in cold water, but that is not always at the disposition of the soldier. It is sufficient to plunge the feet into a bucket of cold water, draw them out immediately, wipe them, and rub them with a brush. By repeating this operation two or three times in succession, a sufficient reaction is produced in every case to bring back proper warmth to the feet. If, on the other hand, the feet are wet or very damp, he should immediately change his stockings and shoes and exercise in one of the ways that we have just enumerated. To preserve his health intact the soldier must avoid cold feet at any price. The connections are so close between the head, the stomach, and the feet that if the latter be not kept constantly warm, varied and grave disturbances are the inevitable consequences.

Finally, let it not be forgotton that cleanliness, strict, unremitting cleanliness of the feet and the foot-gear, will often prevent, and always lessen, the tendency to cold feet.

CHAPTER VIII.

CARE AND PRESERVATION OF THE SHOE.

The military shoe must fulfill a multitude of conditions, as we have sufficiently demonstrated. But that it may render the service which we have a right to expect from it, it must be the object of the most skillful care. The first difficulty will present itself immediately after the manufacture of the shoe.

In countries where the military shoe is furnished by the Government it is manufactured in advance, and preserved in a certain number of depots. These depots, or rooms, should be dry and airy. But if the shoe is pegged or screwed, it dries up, and both pegs and screws become troublesome. If, on the other hand, the depots are damp and cold, the leather is not preserved, while the pegs and screws remain firmly fixed in their places. There is, then, no alternative—*pegged and screwed shoes must always be rejected.*

Leather designed for the manufacture of shoes must possess several essential qualities; it must preserve at any price its suppleness and elasticity, and be as impervious as possible.

As to the soles, if the leather be well tanned and have sufficient thickness, nothing more is necessary for the leather to preserve its impermeability. The upper leather should be cut from hides of from 4 to 5 kilograms (9 to 11 pounds), but to make sure that they are without fault they must not be blackened nor covered with any glazing whatever, so that it will be sufficient to hold them between the eye and the light to discover any perforations there may be in the skins.

The leather ought not to be blackened, because in that condition it will be a good conductor of heat, and in winter the feet will quickly become cold in the shoe; in summer, on the contrary, the leather absorbs the sun's rays, transmits them to the feet, the skin is softened by perspiration, and becomes excoriated after a few hours' march. Second, the leather should not be blackened, because then it cannot successfully undergo the operation of greasing, which renders it flexible, elastic, and impervious. It is an error to believe that blacking preserves the leather flexible and elastic; on the contrary, it makes it as stiff as pasteboard, and it is not long before it becomes completely dried up from the effects of the corrosive acids which penetrate the leather. There are few blackings into the composition of which some acid does not enter; one is convinced of that from their odor. Under these conditions leather loses its flexibility, becomes hard and brittle, is dried up, forms folds which blister the feet, and naturally also loses its impermeability.

It is right to require the soldier to be neat, but in order to be always so he is obliged to blacken his shoes five or six times a day. It is too much work for the result obtained, for when it rains or snows, is muddy or dusty, the ephemeral shine of the blacking is soon done away with.

We hold to a very black shoe and a very white gaiter, but we sacrifice thus the *practical* side to appearance. To preserve all the qualities of the leather there is only

one way, that is to grease it. This operation is as necessary for the upper leather as for the soles; if the shoe is to be rendered impervious by greasing, it is the *sole* which ought to be made so in the first place, unless it be sufficiently thick and flexible to dispense with very frequent greasing. To this end it is necessary to choose a firm, compact leather, but as it dries up quickly—and it must be well dried to be more resistant and less permeable—care should be taken to grease the shoe thoroughly before issuing it to the soldier, and to furnish him, besides, the means of repeating the operation from time to time. In this manner not only will the leather retain its flexibility and elasticity in all temperatures, in the warmest and coldest climates, but it will become entirely impervious. The grease which should be used for this purpose is horse grease. It is the best of all; its cost is not great; it can always be procured; it keeps any length of time, requires no particular care, and may be used with great advantage in the care and preservation of harness. One can also make use of a grease known by the name of *dégras*. The *dégras*, a half solid, half liquid substance of which tanners make use to grease hides, is obtained by steeping sheep-skins in fish oil, combined with a small quantity of potash. It is also called leather manufacturer's soap.

The sole-leather furnished by tanners is already impregnated with *dégras*, without the greasy matter, which is expelled under the action of the hydraulic press; besides, as shoemakers soak the leather, or make it up when it is fresh, because it works better in this state, it becomes necessary to dry the shoes before issuing them to the troops. The soldier ought then to grease them again to make the leather supple; for one cannot march long without being blistered in a shoe of which the leather forms wrinkles, as much rougher as it is drier, if it has not been greased.

It is very important to remark that the upper leather of shoes ought to be moistened before applying the *dégras;* for the water makes this grease penetrate the pores of the leather. Consequently the shoe should be thoroughly cleaned, then moistened on the outside. When the leather is sufficiently damp (it is not necessary to be very much so) it may be greased with a cloth stopper, rubbing the shoe in every part, and afterwards leaving it to dry in *the air*. The leather ought never to be dried near the fire; for the damper it is, the more it will contract; it will become hard, and lose its flexibility and imperviousness. It is useless to add that, besides, it runs the risk of being burned.

In case the preparation, *dégras*, cannot be procured from tanners, the shoe can be greased with a mixture composed of fish-oil and tallow. Melt a certain quantity of tallow, and when it is boiling pour in an equal quantity of fish oil. The fish oil must be very pure and fresh, otherwise it will soon have a bad odor. If it cannot be procured good and in sufficient quantity, it can be replaced by pure olive oil; but that makes it cost more. Finally, as to the tallow used, none is better than mutton tallow.

Lard (hog's fat) is the worst agent that one can use for greasing shoes; for, if the leather is moist it penetrates deeply, opens the pores of the leather too much, deposits therein stearine which takes away all porosity; and, finally, if one is not careful about the seam in the operation of greasing, this grease penetrates to the thread, the wax of which it dissolves, water or dampness penetrates the shoe and the seam itself, and the thread soon comes to pieces.

There are in existence many other preparations for greasing shoes, but we refrain from mentioning them, not only that there may be no temptation to use them, but because, in our opinion, nothing equals horse grease, or the mixture of *dégras* and mutton tallow. Any other preparation will not be of a nature to keep the leather flexible and at the same time impervious, although these two qualities can exist at the same time.

The only difference in using horse grease or *dégras* is that the shoe need not be moistened but simply cleaned to be greased with the former of these articles.

CONCLUSIONS.

Having finished the task that we have imposed upon ourselves of effecting a reform in the military shoe of all armies, we wish still to draw attention to some considerations of the highest importance, and which it is absolutely necessary to consider if we wish the troops really to move with the greatest rapidity and to render everywhere *all* the service that we have a right to expect of them.

As may be understood by the foregoing work, we propose to substitute in all armies

THE COMMON-SENSE SHOE FOR THE FASHIONABLE SHOE.

We believe we have pointed out, as fully as can be done, the difference which exists between these two styles of shoes, but the work will not be complete if we do not add that the common-sense shoe, as we have described it, ought to be worn everywhere by children. In short, *all* feet, without exception, are more or less deformed by the shoe worn at the present day, so that it is necessary to take that into consideration in the manufacture of the common-sense shoe. It is the maker who must judge in each particular case how nearly he can make the shoe approach the common-sense shape. It is only little by little that he will be able to introduce this kind of shoe, and only after

the deformed toes have resumed more or less their normal condition. The use of this shoe will accomplish that, for the feet of young people of twenty years are not so gravely misshapen that they cannot resume their normal position after having worn the common-sense shoe for a certain length of time.

We have taken this circumstance into consideration in the manufacture of the models that we have the honor of presenting, so that they can be worn by the troops in all confidence, for never will they be found in better condition than in this style of shoe.

When the advantages are once appreciated, every one will realize the necessity of having this shoe worn by children, and from that time we shall see feet and toes grow and develop, without undergoing any deformation.

The joints, remaining in their normal positions, would receive no pressure whatever from the shoe, and as a natural consequence children would wear no other shoe in the future.

The immediate advantages which would necessarily result for all armies are so evident that it seems in a measure superfluous to urge them. Let us say that in every country where they shall adopt the common-sense military shoe the army will receive only young men with their feet in a perfect condition; it will no longer allow a straggler in the rear; the vigor and mobility of the men will be increased tenfold; they will be in a state to render services that it is materially impossible to require of them to-day with their feet deformed and mutilated by the shoes they have worn at the present time.

As to the military common-sense shoe that we present, all who have worn it are convinced of one fact, important above everything, and that is that when it is *new* it is worn as easily the *first* time as if it had been worn several months. The foot enters this shoe without difficulty, and is immediately in its place and at its ease, because its actual form and true dimensions have been fully taken into consideration.

Finally, as to the price of this new shoe, it is unnecessary to say that nothing justifies an increase of that, as it is only required to give the shoe a new shape; nothing more. In the work which has just been read, it will no doubt be remarked that we have not spoken of the boot, or the half boot, or bootee. We have designedly avoided this question, because opinions are very much divided in this respect.

We have had the honor of being included in the committee appointed by the Swiss military department to furnish an opinion upon the shoe to be introduced into the army.

We have had the honor of presenting a report of the minority against the introduction of the boot proposed by the majority of the commission. It would be useless to reproduce here the reasons brought to the support of the report in which we had proposed the models which accompany this work. It is sufficient to say that if we have not declared in favor of the boot for the Swiss army, it is, first, on account of the inconveniences we meet with generally in a boot manufactured in advance of its use; and on the other hand, on account of the circumstances under which the Swiss army will be called to make use of it. It is not, as a rule, put upon the foot in winter; therefore the boot is worn in a season when its use offers only disadvantages. We call as witnesses all officers doing duty for some years in summer, that they may tell us if their troops have not always shown a strong aversion to the boot, even in the service of instruction; if the number of sore feet has diminished since the boot is inflicted upon the infantry; and if, in their reports, commandants of schools and of courses of instruction, as well as those of assemblages of troops, have not, in the majority of cases, pronounced against the use of the boot for infantry.

We call also as witnesses the military authorities of the cantons, and higher Swiss officers, called upon to decide upon the two reports of the shoe commission that had been submitted to them by the Swiss military department. By a majority bordering upon unanimity, they pronounced against the boot for foot troops.

The situation is not the same in a permanent army, and, besides, it is necessary to take into consideration the nature of the climate of the country where the boot has been worn till now, and where it could be introduced in the future.

In spite of the models of *shoes* which we present, we are not opposed to the *boot* in countries in which its use is justified by the necessities of the climate. It is evident, in fact, that in a warm country the boot and its modifications renders no service, and only causes inconvenience, while in a temperate or cold country the buskin and the shoe would perhaps be insufficient. It is a question of habit and education. What shoe is worn in different countries to the age of twenty? If it be the boot or the half boot, it is evident that either habit or the nature of the climate has made it a necessity to the greatest number. There is reason, then, in taking this into consideration in military life, and not to deprive oneself of the advantages which must necessarily result from habits contracted by men in civil life. It is natural that each country should have its habits, and that as in many countries they would march very badly in the Indian moccasin, so the Spaniard, so active in his sword drills, would not go far booted like a Russian or a German.

Consequently, taking into consideration the acquired habits and the exigencies of military life, we would choose for the army the shoe most common in the country.

Among the numerous requirements of military life there is one of special importance. We speak of the *mobility* of the soldier. We are not the first to declare this truth. General Trochu, in his book published in 1867, speaking of the necessity of returning to the principles that ought to regulate the existence of armies in peace, said:

"Why defer the realization of it in a time when *quickness, above everything, will be the invincible law of war, and will become the preponderant aptness of armies?*"

Two principal causes favor or hinder this quickness and mobility—*the burden of the soldier* and the style *of shoes* he has on his feet.

The weight of the knapsack varies considerably in different countries; it is of this that the men complain most, and in an attack it frequently happens that they seek to free themselves of it; at least for the moment. Now, if in the ardor of the strife the company is carried forward a great distance, or is obliged to beat a hasty retreat, the knapsacks are inevitably lost; and, without the articles which they contain, the man is not only deprived of all resources, but he will be entirely *hors de combat* if, as in the Swiss army, for example, his reserve ammunition is inclosed in the cover of the haversack. This is truly a disaster that nothing can avert, and upon the consequences of which we certainly have no reason to dwell.

Napoleon I, in speaking of the knapsack, said, "Let the knapsack be reduced to the least possible size, but let the soldier have it always with him."

To prevent men from freeing themselves of it, it becomes urgent to diminish its weight, and to no longer carry it upon the shoulders, as is the custom now in most armies; for, with the present style of suspending it, the result must be to repress muscular efforts, movements of respiration, and the play of the circulation.

The English army possesses to-day the best system of suspending the knapsack. It is worn on a level with the loins, by means of braces crossing behind, passing over the shoulders and fastened to the sword-belt; some small leather straps, starting from the knapsack, under the arms, are buckled in front to the braces and prevent the knapsack from slipping about. The chest is thus left entirely free, and the knapsack has not the adherence of one fastened to the shoulders; the man is not so harassed; he breathes freely, and his equilibrium is perfectly maintained by means of two cartridge-boxes and a bag for cartridges fastened to his belt. Finally, which is an important advantage, by simply unbuckling his belt the man takes off all his equipment, without having to undo a strap, and puts it on with the same facility. Let this knapsack be introduced everywhere and the burden of the soldier would be much diminished.

Finally, this manner of carrying the knapsack is similar to that made use of by numerous workmen who travel over the continent; but the system of suspending the English one is evidently the most practical of all.

As to the burden of the infantry soldier in general, it is everywhere too great, and ought in no case to exceed 25.076 kilograms (55 pounds), even including all that can be added as portable accessories. And even in this case the whole burden ought to be distributed as follows:

	Kilograms.	Pounds.
Clothing	6.482	14
Equipments and accessories	3.942	8¼
Arms	6.350	14
Linen and shoes	4.352	9¼
Ammunition (100 cartridges)	3.150	7
Rations (one day)	0.800	2
Total weight	25.076	55

This weight is exceeded in nearly all armies. The French foot soldier carries 32.918 kilograms (72¼ pounds), including four days' rations; the Prussian soldier, 28.240 kilograms (62¼ pounds), including eighty cartridges and three days' rations; the Italian soldier, 30 kilograms (66 pounds); the Russian soldier 31.268 kilograms (69 pounds); the American soldier, 24.051 kilograms (53 pounds), with eight days' rations, 20 kilograms (44 pounds) only, with forty cartridges and without rations; the English soldier, 22.254 kilograms (49 pounds). The Swiss soldier carries the weight above indicated, 25.076 kilograms (55 pounds).

Under these conditions the march will be felt so much the more if the man have not on his feet shoes perfect in every respect; for if we call to mind that the soldier carries from 18 to 20 kilograms (40 to 44 pounds) more than a man in common life; that he carries the greater part of it on his shoulders; that he increases the weight still more by personal accessories, such as his money, letters, pocket-book, pipe and tobacco, &c.; and that his knapsack getting wet weighs at least 500 grams (23

ounces) more, we shall easily be convinced that if it be necessary to diminish the weight of the whole burden of the soldier, it is still more so to secure for him a shoe fulfilling all the conditions desired to mitigate as much as possible this intolerable situation.

If the models of shoes that we present are not perfection itself—perfection, moreover, not being the fruit of human genius—they realize in every case considerable advantage over all styles known at the present time. Now, in a country where they wish to substitute the boot or the half-boot, nothing is more easy than to furnish the boot with the same style of fastening as our buskin No. 1, and the half-boot with the same fastening as our shoe. The style of fastening of this buskin and this shoe, applied to the boot and the half-boot, is the means of getting around an inconvenience that nothing else can prevent; that is, to fit boots or half-boots on young men of twenty years, when they have not yet attained their full growth and physical development. The result is easy to understand. At this age the feet continue to grow; then after a few months of service these boots necessarily become too small, too short, and too narrow, and the men can wear them no longer.

There is now a simple way of preventing this grave inconvenience, namely, by adopting the models of shoes that we have the honor of presenting; or of introducing into the boot an *inner* sole, of which we are about to speak.

The boot, besides, is far from being indispensable; it would be much better to dispense with it, because it requires much more leather than the buskin or the shoe, and we ought certainly to try to be economical in furnishing an article of clothing that wears out as rapidly as the shoe. Besides the boot, manufactured in advance, will always possess disadvantages that our models of buskins and shoes do not present. In summer it will be too warm; if it be not well fitted to the foot, if it be too small or too large, it will compress the foot immoderately, will wound it, or it will not stay on.

In countries where the boot is in use, they seek to meet the evil by issuing to the men generally boots much larger than their feet. They do not feel badly in summer because they give space for the increase of the size of the foot, but they make the walking heavy, and in winter, or in soft ground, the feet slip around in the shoe, and are wounded, or the boots remain stuck in the mud. The German army had such an experience during its maneuvers in the autumn of 1879.

We have already said, in Chapter V, that the use of an *inner* sole would be the means of preventing the points of the nails from penetrating the flesh. This inner sole could be made to overcome two faults of which we have just spoken, in the case boots become too small after a few months' use on account of the growth of the feet; and in the case of boots too large *in the beginning*, which they have *purposely* issued to the men to allow for the increase in the size of the foot during great heat.

In the first case it is sufficient to take out the inner sole, when the soldier finds it necessary to have more room in the shoe; or to put it in large boots in proportion to the growth of the foot.

In the second, the inner sole should only be worn during winter, since it would be superfluous in a season of great heat, when, on account of their increase in size, the feet have no more room in the shoe than is necessary to them.

From both these points of view there is reason for having an inner sole to every shoe.

But, as we have already said, this sole ought to be of very smooth leather, and thick enough not to wrinkle from the effects of perspiration.

All other soles, and especially those of cork, offer only disadvantages and even dangers; for, when they are dampened by perspiration or by water, they maintain a constant moisture in the shoe.

Such are the numerous precautions to be taken with boots. It is reasonable, then, to weigh carefully the advantages and disadvantages of this covering for the foot before introducing it, or securing it for the infantry in particular. It would have to be kept in a depot during the summer, and only issued to the troops for winter.

For mounted troops the soft high-top boots, with or without the system of fastening of our buskin No. 1, and our shoe, as a second shoe or resting shoe, appear to us to constitute sufficient covering for the foot.

Finally, as to engineering troops, who are often required to work in the water or in soft ground, they must also have a high boot, but with thicker legs and without the *soufflet*, and they must have great care to render them impervious by greasing, as we have shown in the preceding chapter.

Whatever may be the style adopted for mounted troops and engineers, it is essential that it be given the form that we have sufficiently described, which will be very easy, since the models, patterns, and lasts necessary for that are already in existence, and the same conditions must be observed in the manufacture of this boot as we have required for the shoe of the foot soldier.

4.—*Report of Lieut. Col. J. G. Chandler, deputy quartermaster-general, United States Army, of the operations of the Quartermaster-General's Office pertaining to transportation and indebted railroads, regular and miscellaneous supplies, and miscellaneous claims and accounts, during the fiscal year ending June* 30, 1883.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 19, 1883.

GENERAL: I have the honor to submit the following report of the operations of this office pertaining to transportation and indebted railroads, regular and miscellaneous supplies, and miscellaneous claims and accounts during the fiscal year ending June 30, 1883.

TRANSPORTATION.

During the year the Quartermaster's Department provided transportation by rail, water, wagon, and stage for 65,166 persons, 6,279 beasts, and 118,935 tons of material, as exhibited in statement hereto appended marked A.

The expenditure for this service out of "appropriation transportation of the Army," as reported by disbursing officers, will aggregate $2,149,051.49; of which $414,908.84 has been paid for the transportation of persons, $901,663.23 for the transportation of live stock and freight, and $384,322.35 on accounts not strictly chargeable either to passenger or freight transportation, leaving $448,157.07 on outstanding accounts not settled at the close of the fiscal year.

The expenses of military transportation not paid out of "appropriation transportation of the Army" comprise that provided over the bonded Pacific railroads, in value $845,144.46, which is credited at the Treasury Department on the debts of those railroads, and that provided over land-grant railroads, to which fifty per centum of tariff rates is paid, under act of Congress of June 30, 1882, making special appropriation of $125,000 for that purpose, all of which will probably be needed to pay for such service.

The larger movements of troops during the year, with the length of march or movement in each case, are set forth in the accompanying statement marked B, and may be briefly indicated as follows:

Third Artillery, Company F, from Department of the South to Department of Texas.

Fourth Artillery, Company F, from Department of the East to Department of Dakota.

Fifth Artillery, Company D, from Department of the East to Department of the Platte.

Seventh Infantry, headquarters and ten companies, from Department of Dakota to the Department of the Platte, costing $27,394.25.

Twelfth Infantry, headquarters and ten companies, from Department of Arizona to Department of the East, costing $47,443.57.

Fifteenth Infantry, headquarters and ten companies, from Department of the Missouri to Department of Dakota, costing $35,801.47.

Twenty-second Infantry, headquarters and ten companies, from Department of Texas to Department of the Missouri, costing $37,653.82.

RAILROAD TRANSPORTATION.

Thirty thousand two hundred persons, 5,459 beasts, and 76,346 tons of material were transported by railroad under direction of the Quartermaster's Department during the year.

This service has cost (1) by payments out of "appropriation transportation of the army," $967,031.30; of which $328,779.15 was for transportation of persons, $357,630.02 for transportation of live stock and freight, and $280,622.13 for payment of outstanding accounts at the close of the fiscal year; (2) by credit on account of indebtedness of bonded Pacific Railroads, $845,144.46, of which $222,259.92 was for transportation of persons, and $622,884.54 for transportation of live stock and freight; (3) by payments to land-grant railroads out of special appropriation for the purpose of $125,000; total cost to the United States of railroad transportation furnished to the Quartermaster's Department during the year, $1,937,175.76.

BONDED PACIFIC RAILROADS AND THEIR LEASED LINES AND BRANCHES.

Eight thousand nine hundred and forty-eight persons, 2,551 beasts, and 43,881 tons of material were transported for the department over the bonded Pacific railroads and their leased lines and branches during the year.

The service performed by each road is shown in the following table:

Name of company.	Number of persons transported.	Number of animals transported.	Pounds of freight transported.
Union Pacific (branches and leased lines)	6,748	1,756	55,391,373
Central Pacific (branches and leased lines)	849	605	30,093,076
Sioux City and Pacific	1,351	190	2,279,202
Total	8,948	2,551	87,763,651

The amounts which will inure for this service to the credit of the respective railroads upon the books of the Treasury, computed at the full rates of their published tariffs, aggregate the sum of $845,144.46.

The amount inuring to each road is shown in the following table:

Name of company.	Amount of accounts referred to Treasury for settlement.	Estimated amount of accounts not rendered.	Proportion inuring for troops.	Proportion inuring for stores.	Total amount.
Union Pacific	$370,561 09	$123,908 72	$127,508 80	$366,961 01	$494,469 81
Central Pacific	215,677 72	120,386 27	88,185 74	247,778 25	335,963 99
Sioux City and Pacific	2 65	14,708 01	6,565 38	8,145 28	14,710 66
Total	586,141 46	259,003 00	222,259 92	622,884 54	845,144 46

In addition, to the above, accounts for telegraphic service rendered by the Union Pacific Railroad Company were filed in amount $1,678.60, and remained in this office on June 30, 1883, making total amount inuring to the Union Pacific Railroad Company $496,148.41.

Of the above amount of $845,144.46 inuring to these roads, the proportionate amounts accruing over the subsidized and unsubsidized portions of the respective roads, are estimated to be as follows:

Name of company.	Total amount.	Subsidized.	Unsubsidized.
Union Pacific	$493,469 81	$454,955 66	$39,514 15
Central Pacific	335,963 99	68,626 79	267,337 20
Sioux City and Pacific	14,710 66	3,538 88	11,171 78
Total	845,144 46	527,121 33	318,023 13

The following is a statement of the accounts of these companies which awaited examination and adjustment in this office at the close of the fiscal year:

Name of company.	In Treasury.	In Quartermaster-General's office.	Total.
Union Pacific	$1,333,759 15	$1,678 60	$1,335,437 75
Kansas Pacific	79,001 17	.....	79,001 17
Central Pacific	93,718 13	.....	93,718 13
Sioux City and Pacific	7 95	.....	7 95
Total	1,506,486 40	1,678 60	1,508,165 00

The following statement shows the total settlements for military transportation over these roads from the date when they were first opened for traffic up to the close of the fiscal year ending June 30, 1883:

Name of company.	Amount paid in cash under act of July, 2, 1864.	Amount credited on bonds under act of July 2, 1864.	Amount withheld under act of March 3, 1873 (Rev. Stats., 5260).	Amount withheld under act of May 7, 1878.	Total.
Union Pacific	$1,693,360 69	$1,693,360 87	$3,219,311 09	$1,257,448 93	$7,863,481 58
Central Pacific	261,106 21	261,106 29	691,132 83	1,583,189 62	2,796,534 95
Kansas Pacific	881,196 08	881,196 15	776,143 82	.....	2,538,536 05
Sioux City and Pacific	3,594 28	3,594 29	48,365 54	.....	55,554 11
Total	2,839,257 26	2,839,257 60	4,734,953 28	2,840,638 55	13,254,106 69

The following statement shows the amount of the accounts of the Pacific railroad companies which have been acted upon in this office during the fiscal year:

Name of company.	Amount in Quartermaster-General's Office June 30, 1882.	Amount received during fiscal year.	Amount referred for settlement during fiscal year.	Amount in Quartermaster-General's Office June 30, 1883.
Union Pacific	$1,546,655 69	$527,338 91	$2,072,316 00	$1,678 60
Central Pacific	674,116 70	409,777 61	1,083,894 31	.....
Kansas Pacific	75,723 67	1,991 35	77,715 02	.....
Sioux City and Pacific	5,634 91	2,126 48	7,761 39	.....
Total	2,302,130 97	941,234 35	3,241,686 72	1,678 60

LAND-GRANT RAILROADS.

Payments for military transportation performed during the year over certain land-grant railroads were made through settlements of accounting officers of the Treasury under the law of June 30, 1882, making appropriations for the support of the Army for the fiscal year ending June 30, 1883, and for other purposes, which enacts as follows:

For the payment for Army transportation lawfully due such land-grant railroads as have not received aid in Government bonds, to be adjusted by the proper accounting officers in accordance with the decision of the Supreme Court in cases decided under such land-grant acts, but in no case shall more than fifty per centum of the full amount of the service be paid, one hundred and twenty-five thousand dollars: *Provided*, That such compensation shall be computed upon the basis of the tariff rates for like transportation performed for the public at large, and shall be accepted as in full for all demands for said services: *And provided further*, That any such land-grant roads as shall file with the Secretary of the Treasury their written acceptance of this provision shall hereafter be paid for like services as herein provided; and all accounts of such railroads for services heretofore rendered shall be audited and paid as herein provided upon application of such roads and their acceptance of such sum in full of all claims for such services; and all laws inconsistent herewith are hereby repealed.

Of the $125,000 appropriated by the foregoing law, $76,108.38 remained in the Treasury at the close of the fiscal year unexpended; which, however, is not more than sufficient to settle accounts in course of adjustment or not yet presented.

I respectfully refer to the two preceding annual reports of the transportation branch of this office for a full statement of the laws affecting land-grant railroads in the matter of military transportation, and of the relations which exist between these railroads and the Quartermaster's Department.

WAGON AND STAGE TRANSPORTATION.

By wagon, including public teams, contractors' trains, and teams hired for special service, the Quartermaster's Department transported during the fiscal year, 31,624 tons of military stores, at a cost to the appropriation transportation of the Army of $773,920, as reported by disbursing officers.

Forty-four contracts for wagon transportation made by officers of the department were received at this office during the year, an abstract of which, showing names of contractors, routes of supply, and rates of contracts accompanies this report, marked C. By stage, 3,577 passengers and 13,079 pounds of stores and extra baggage were transported under direction of the Quartermaster's Department during the year, at a cost of $58,880.05.

WATER TRANSPORTATION.

During the fiscal year there were carried by water for the department 81,389 persons, 820 beasts, and 10,959 tons of material, at a cost of $349,220.14.

This service was performed by vessels belonging to established commercial lines, by contract, and by vessels owned and chartered by the United States.

Three contracts for water transportation made by officers of the Quartermaster's Department were received at this office during the year. (Statement marked D.)

The following-named vessels, owned by the War Department, have been in the service of the Quartermaster's Department during the fiscal year, viz:

Steamer Chester A. Arthur, formerly the Henry Smith, purchased June 30, 1876, for $26,000; average yearly cost of repairs, $4,799.12; average yearly cost of running expenses, $8,927.79. Employed between New York City and the forts in New York Harbor in transporting troops and supplies.

Steamer Ordnance, purchased June 30, 1876, for $18,000; average yearly cost of repairs, $3,706.02; average yearly cost of running expenses, $5,075.82. Employed by the Ordnance Board, United States Army, in running between New York City and the proving ground at Sandy Hook, transporting men, material, and ordnance property.

Although this vessel was purchased from funds of the Quartermaster's Department, and all expenses for her maintenance and repairs are borne by this Department, she is employed exclusively in the service of the Ordnance Department, as above stated.

Steam-tug Atlantic, purchased October 15, 1878, for $13,865.56; average yearly cost of repairs, $2,357.05; average yearly cost of running expenses, $7,507.91. Employed as a ferry-boat between Governor's Island, New York Harbor, and New York City.

Steam-tug Resolute, purchased November 14, 1879, for $17,947.46; average yearly cost of repairs, $2,296.38; average yearly cost of running expenses, $6,443.31. Employed in Boston, between the city and Fort Warren.

Steam-launch Thayer, purchased October 8, 1874, for $7,200; average yearly cost of repairs, $1,451.81; average yearly cost of running expenses, $3,238.83. Employed at Fort Adams, R. I., in Newport Harbor.

Steam-launch Monroe, purchased November 20, 1875, for $15,200; average yearly cost of repairs, $826.61; average yearly cost of running expenses, $2,872.78. Employed at Fort Monroe, Va.

Steam-launch General Jesup, purchased June 30, 1874, for $5,000; average yearly cost of repairs, $898.31; average yearly cost of running expenses, $1,464.06. Employed at Forts Schuyler and Hamilton and Governor's Island, New York Harbor.

Steam-launch General Greene, purchased March 3, 1874, for $5,250; average yearly cost of repairs, 538.86; average yearly cost of running expenses, $1,022.90. Employed at Fort McHenry, Md., in Baltimore Harbor.

Steam-launch Hamilton, purchased February 1, 1875, for $7,800; average yearly cost of repairs, $1,013.46; average yearly cost of running expenses, $2,848.55. Employed at David's Island, New York Harbor, headquarters general recruiting service.

Steam-launch Barrancas, purchased November 7, 1874, for $5,750; average yearly cost of repairs, $919.97; average yearly cost of running expenses, $1,531.56. Employed at Fort Barrancas, Fla.

Steamboat General Sherman, purchased April 30, 1877, for $19,394.02; average yearly cost of repairs, $4,031.19; average yearly cost of running expenses, $20,994.36. Employed under the direction of the post quartermaster at Bismarck, Dak., on the Upper Missouri and Yellowstone Rivers. The services of this boat being no longer required on the Upper Missouri and Yellowstone Rivers, she was sent to Saint Louis, Mo., and sold at public auction on November 8, 1882, for $5,300.

Propeller General McPherson, purchased September 1, 1867, for $40,000; average yearly cost of repairs, $6,794.60; average yearly cost of running expenses, $17,463.32. Employed in the harbor of San Francisco, Cal., transporting troops and supplies between the city and the forts.

Steam-launch Dispatch, formerly the Chelan, purchased November

28, 1879, for $3,510; average yearly cost of repairs, $871.08; average yearly cost of running expenses, $1,458.39. Employed at Vancouver Depot, Wash.

Steam-launch Amelia Wheaton, purchased August 24, 1880, for $8,000; average yearly cost of running expenses, $337.41. Employed at Fort Cœur d'Alene, Idaho.

Steam-launch Lillie Lee, purchased July 23, 1879, for $2,500; average yearly cost of repairs, $86.25. Employed at Fort Totten, Dak., on Devil's Lake.

Schooner Matchless, purchased June 5, 1863, for $13,500; average yearly cost of repairs, $790.70; average yearly cost of running expenses, $3,593.83. Employed at Key West, Fort Brooke, and Fort Barrancas, Fla.

Sloop Belle of the Bay, purchased July 25, 1882, for $275. Employed at Saint Francis Barracks, Fla.

Statement of vessels owned and purchased herewith, marked E.

The total cost of running and maintaining these vessels during the fiscal year, as reported to this office, was $131,112.68.

Eighteen vessels of different kinds are reported by officers of the Quartermaster's Department to have been employed at various times under charter during the fiscal year, at an expense of $19,799.87 (statement accompanying, marked F).

TRANSPORTATION ACCOUNTS AND CLAIMS.

Two thousand four hundred and twenty-five transportation accounts and claims, amounting to $3,576,231.48, were adjusted in the transportation branch during the year. Of these, 2,326, amounting to $3,173,977.92, were referred to the proper bureau or office for settlement; 43, amounting to $216,175.74, were unfavorably reported upon and rejection recommended; and 56, amounting to $186,077.82, were suspended for additional evidence. Forty-one, amounting to $6,111.86, were at the close of the fiscal year awaiting action or under adjustment.

The various classes of accounts and claims acted upon by the transportation branch of this office comprise land-grant railroad accounts, bonded Pacific railroad accounts, miscellaneous railroad, water, wagon, and stage accounts, telegraph accounts, claims for service on military railroads during the war, and for use or hire of wagons and teams, in all cases where the settlement or payment of such accounts and claims require the action of the accounting officers of the Treasury; also, where instructions are required by disbursing quartermasters upon transportation accounts and claims in cases where the laws and regulations are not clear or not understood; also, the freight accounts of the several bureaus of the Treasury, the Navy, and the Interior Departments, in cases where the transportation was furnished under direction of the Quartermaster's Department; and in this connection attention is invited to copy of circular of this office dated August 15, 1883, marked G, directing attention to the rules and regulations regarding such transportation and the settlement of accounts arising therefrom.

TRANSPORTATION APPROPRIATION AND ITS DISBURSEMENT.

By act of June 30, 1882 (Army bill), the sum of $4,164,000 was appropriated for Army transportation for the fiscal year ending June 30, 1883.

The following is a recapitulation of expenses out of the appropriation "transportation of the Army" for service during the fiscal year ending June 30, 1883, gleaned from the reports of disbursing officers:

RECAPITULATION.

Nature of transportation.	Passenger.		Freight.		Expenditures not strictly chargeable either to passenger or freight paid to June 30, 1883.	Outstanding unpaid accounts June 30, 1883.	Total of payments made and outstanding accounts.
	Number transported.	Amount paid to June 30, 1883.	Pounds transported.	Amount paid to June 30, 1883.			
Rail	30,200	$328,779 15	152,691,863	$357,630 02	.....	$280,622 13	$967,031 30
Water	31,389	33,455 46	21,917,731	78,384 88	$149,321 17	88,058 63	349,220 14
Wagon	.....	.....	63,248,546	464,741 91	235,001 18	74,176 91	773,920 00
Stage	3,577	52,674 23	13,079	906 42	.....	5,299 40	58,880 05
Miscellaneous	.....	.....	.....	.....	1,455,214 70	81,307 22	1,536,521 92
Grand total	65,166	414,908 84	237,871,224	901,663 23	1,839,537 05	529,464 29	3,685,573 41

Miscellaneous expenses include about $900,000 to pay transportation employés, teamsters, agents, and mechanics repairing wagons and harness, &c.

Inclosed is a statement (marked G) in detail prepared from reports of disbursing officers at each quartermaster's depot and in each military department, showing cost of transportation of the Army, which include expenses of rail, water, wagon, and stage transportation; the purchase of transportation animals, the purchase and repair of army and spring wagons, ambulances, harness, &c.; the hire of transportation agents, teamsters, &c.; the purchase, repair, and operation of vessels; the building and repair of wharves and wharfage; the supply of posts with water and digging wells; tolls on turnpikes, ferries, and bridges, and removal of obstructions from roads, harbors, and rivers, when required in military operations, together with a statement of the umber of persons and pounds of freight transported under direction n the Quart ermaster's Department during the fiscal year.

At the close of the fiscal year, June 30, 1883, the sum of $279,478.27 pertaining to this appropriation remained undrawn in the Treasury, and a large amount was in the hands of disbursing officers unexpended.

INDEBTED RAILROAD COMPANIES.

Four railroads are still borne upon the books of this office as indebted to the United States for rolling stock and railway material purchased under authority of executive orders of 1865 and 1866.

The Edgefield and Kentucky Railroad, from Nashville to Guthrie, Tenn., 47 miles, has apparently lost its individuality by absorption—first into the Saint Louis and Southeastern Railway, and later into the Louisville and Nashville Railroad. The State of Tennessee purchased property for this road the appraised value of which was $114,772.86. The total interest, expenses, and charges upon this debt to June 30, 1883, are shown by the books of this office to be $155,686.56; total payments made, $2,137.88; total principal, interest, expenses, and charges unpaid June 30, 1883, $268,321.54.

This railroad company has never made a cash payment on its debt.

The McMinnville and Manchester Railroad, from Tullahoma to McMinnville, Tenn., 35 miles, now absorbed into the Nashville, Chattanooga and Saint Louis Railroad Company, purchased property valued

at $46,508.54, upon which the accrued interest, expenses, and charges have aggregated $67,133.47, payments $5,079.10, leaving due June 30, 1883, $108,562.91. Date of last payment, June 7, 1867.

The inclosed copy of letter of the Solicitor of the Treasury, dated November 28, 1882, marked I, shows that the suit brought January 8, 1872, against the McMinnville and Manchester Railroad Company in the United States circuit court for the middle district of Tennessee, to recover amount due to the United States on rolling stock, &c., bought by the company in 1866, resulted in a decree in favor of the Government for the amount claimed with interest. The judgment, however, has not been satisfied.

The Mobile and Ohio Railroad, from Mobile, Ala., to Columbus, Ky., 472 miles, which is still operated under the same title, purchased property valued by appraisal at $505,143.70; the total interest, expenses, and charges thereon, as entered upon the books of this office, aggregated $135,580.36 on June 30, 1883; the total payments made, $535,210.25; total principal, interest, expenses, and charges unpaid June 30, 1883, $105,513.81. Date of last cash payment, June 15, 1869.

It will be observed that the Mobile and Ohio is the only one of the four indebted railroads which seems to have shown any intention of paying off its debt.

Three acts of Congress have passed under which compromises have been effected, and the accounts closed of several of these indebted railroads upon the basis of a reduction in the value of the property purchased and in the interest charges, $7\frac{3}{10}$ per cent. per annum.

One of these acts, that of February 27, 1875, specifically provided for the settlement of the indebtedness of the Mobile and Ohio Railroad Company, authorizing an equitable abatement in the amount charged against the railroad. Under this act the accounts of the Selma, Rome and Dalton Railroad Company and the Memphis and Little Rock Railroad Company were closed, but it was found not possible to close the account of the Mobile and Ohio Railroad Company, because, on application of the principles considered equitable, a cash payment from the United States to the railroad company was necessary, as the railroad had already paid over $500,000 on its debt, and it was considered that the law did not justify a settlement which would bring the Government into debt. (See report of the Secretary of War, dated April 29, 1876, Senate Ex. Doc. 57, first session Forty-fourth Congress.)

At the date of that report the account against the company (principal, interest, and expenses) amounted to about $69,000. No payments have been made since that date, but interest at $7\frac{3}{10}$ per cent. per annum has been added thereto upon the books of this office. The railroad company has meantime been working to effect a settlement through Congress, based upon the settlements made with the other railroads.

The report (409) of the Senate Committee on Railroads, Forty-seventh Congress, first session, recommended passage of Senate resolution 48, to provide for the settlement of accounts of the Mobile and Ohio Railroad, but neither this resolution, nor any other affecting the matter, has yet become a law, and this office, in performance of the duties imposed upon it, continues charging interest on the debt.

In this case it is suggested that Congress be asked to pass some equitable law to close this long standing account.

The Memphis, Clarksville and Louisville Railroad, from State Line (near Guthrie) to Paris, Tennessee, is no longer recognized as the name of the corporation which operates that line of railroad, but it is now operated by the Louisville and Nashville Railroad Company.

The State of Tennessee purchased property for this road, the ap-

praised value of which was $336,932.36; interest, expenses, and charges which have accrued to June 30, 1883, $441,397.43; total amount of payments made, $71,022,86; balance, principal, interest, and expenses, and charges June 30, 1883, according to the books of this office, $707,306.93. Date of last cash payment, March 26, 1869.

With reference to the debt of this railroad and that of the Edgefield and Kentucky Railroad, I have again to report that no reply has yet been received to the following letter, dated January 27, 1881, sent to the governor of Tennessee:

SIR: In 1865, at the close of the rebellion, the State of Tennessee purchased of the United States rolling stock and railway material for the use and benefit of the Edgefield and Kentucky Railroad of the value of $114,772.86, and for the benefit of the Memphis, Clarksville and Louisville Railroad of the value of $336,932.36, and under special act of the legislature of said State gave bonds in double the value of the property purchased for the payment of the debt within two years, with interest at the rate of 7 3/10 per cent per annum. The payments on these debts to date aggregate $2,137.88 and $71,013.44, respectively, and the balance due is $246,559.92 and $645,077.63, respectively.

No payments are being made on these debts at the present time, and they are increasing by accumulation of interest. Your attention is invited to this matter, with request that you inform this office if you cannot make arrangements to pay the debts at an early day, and, if you cannot do so, that you submit the matter to the legislature now in session, and request it to provide the necessary funds for their payment.

Very respectfully, your obedient servant,

M. C. MEIGS,
Quartermaster-General, Bvt. Maj. Gen., U. S. A.

In conclusion, I have to report that this office has exhausted all reasonable efforts to procure payment of these disputed debts. It has not the facilities for prosecuting the matters involved any further without special legislation of Congress, and in my opinion the time has arrived when this office should be entirely relieved of any duties connected with southern railroad indebtedness, and that the accounts be transferred to the Treasury or some Department of the Government more suitable and having the necessary facilities to perform the character of work involved.

REGULAR AND MISCELLANEOUS SUPPLIES.

ANIMALS.

The following statement shows the number of horses and mules purchased in the several military departments and at general and other depots during the fiscal year, so far as the reports have been received at this office; also their total cost and average cost:

Cavalry and artillery horses.

Where purchased.	No.	Total cost.	Average cost.
Department of the East	8	$1,800 00	$225 00
Department of the South	5	905 00	181 00
Department of Dakota	6	740 00	123 33
Department of the Missouri	313	48,145 00	153 81
Department of the Platte	150	22,925 00	152 83
Department of California	179	26,000 00	145 25
Department of the Columbia	105	19,355 00	184 33
New York Depot, New York	38	9,650 00	253 94
Jeffersonville Depot, Indiana	3	550 00	183 33
Saint Louis Depot, Missouri	146	19,293 00	132 14
West Point, New York	12	1,750 00	145 83
Total	965	151,113 00	156 59

NOTE.—This table is incomplete, for the reason that department reports received at this office fail to state the number and cost of horses for the cavalry purchased at various points by boards of officers appointed for the purpose.

Mules and team horses.

Where purchased.	Mules.			Horses.		
	No.	Total cost.	Average cost.	No.	Total cost.	Average cost.
Department of the East	4	$725 00	$181 25	18	$3,530 00	$196 11
Department of the South	1	165 00	165 00	1	175 00	175 00
Department of the Missouri	74	12,700 00	171 61			
Department of California				5	1,115 00	223 00
Department of the Columbia	20	3,000 00	150 00	4	555 00	138 75
New York Depot, New York	2	450 00	225 00	11	3,075 00	279 54
Philadelphia Depot, Pennsylvania	4	730 00	182 50	2	400 00	200 00
Washington Depot, District of Columbia				6	1,525 00	254 16
Chicago Depot, Illinois				5	1,175 00	235 00
Saint Louis Depot, Missouri	90	15,385 00	170 94	1	130 00	130 00
Total	195	33,155 00	170 02	53	11,680 00	220 37

The following is a tabular statement of the sales of public animals in the different departments, and at general and other depots, as reported to this office, showing number sold and amount realized:

Where sold.	Cavalry and artillery horses.		Draft horses.		Mules.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
Department of the East	15	$1,187 85	11	$518 50		
Department of the South	6	494 25	2	37 50	5	$212 25
Department of Dakota	164	11,766 66	15	1,129 27	73	3,859 00
Department of the Missouri	203	12,271 50	1	50 00	192	10,359 00
Department of the Platte	190	11,349 55			95	4,851 50
Department of Texas	100	4,727 20	10	427 00	108	4,070 50
Department of California	23	953 00	6	189 00	26	1,069 50
Department of the Columbia	28	1,326 00	25	620 00	34	1,034 50
Department of Arizona	182	7,618 79	4	184 00	9	328 00
New York Depot, New York	11	1,516 00	6	228 00	6	377 00
Philadelphia Depot, Pennsylvania					2	140 00
Washington Depot, District of Columbia			40	3,704 00	1	77 50
Chicago Depot, Illinois			2	138 00		
Saint Louis Depot, Missouri					2	155 00
Fort Myer, Virginia	1	50 00	1	50 00		
West Point, New York	14	721 50				
Total	937	53,982 30	123	7,375 27	553	26,533 75

The following is a summary of the number of animals purchased, sold, died, &c., during the fiscal year and remaining on hand at its close:

On hand, purchased, &c.	Horses.	Mules.	Oxen.
On hand July 1, 1882	8,068	8,464	25
Purchased	1,715	390	
Taken up, &c	117	62	
Total to be accounted for	9,900	8,916	25
Sold	1,060	553	
Died	323	361	
Lost and stolen	92	52	
Total sold, died, &c	1,475	966	
On hand June 30, 1883	8,425	7,950	25

ESTIMATES AND REQUISITIONS.

Estimates for annual supplies and miscellaneous estimates and requisitions have been received and acted upon during the fiscal year, as follows:

From Military Division of the Atlantic	344
From Military Division of the Missouri	653
From Military Division of the Pacific	204
From general depots, independent posts, &c	276
Total	1,477

CONTRACTS.

During the year there were received, examined, and filed in this office, 1,028 contracts, of which 802 were for 126,712 cords of wood, 129,485,178 pounds of coal, 75,970 bushels of charcoal, 26,175,577 pounds of corn, 23,023,820 pounds of oats, 8,710,700 pounds of barley, 3,388,904 pounds of bran, 116,334,666 pounds of hay, 8,254,932 pounds of straw; 14 for indefinite quantities of fuel and forage; 4 for work on national cemeteries; 67 for clothing, camp, and garrison equipage; 6 for horses and mules; 4 for harness materials; 48 for transportation (1 being for pack train); 5 for buildings; 1 for ambulance wagons; 4 for wagon materials; 1 for 25 carts and 3,000 open links; 2 for building materials; 7 for mineral oil; 11 for miscellaneous services; 39 leases; 3 for leather; 2 for broom corn; 3 for stationery; 1 for packing-boxes; 1 for construction of cisterns; and 3 for construction of roadways.

WAGONS, AMBULANCES, AND HARNESS.

No six-mule army wagons nor two-horse and four-horse or mule wagons were purchased during the year, the stock on hand having been found sufficient to meet all requirements.

Twenty-five ambulance wagons were purchased under contract with Alexander Caldwell, of Leavenworth, Kans., for $206 each.

Sixteen spring wagons, Dougherty pattern, were furnished to posts during the year from stock on hand, and eight spring wagons of other patterns were purchased and supplied under authority of the Secretary of War.

In accordance with the authority of the honorable the Secretary of War, there were manufactured during the year at the Military Prison at Fort Leavenworth, Kans., 136 sets of six-mule army-wagon harness, complete, at a total cost of $10,483.49, or a cost per set of $77.08; and 127 sets of four-mule ambulance harness complete, at a total cost of $6,944.88, or a cost per set of $54.68.

STOVES AND RANGES.

There were delivered to the Quartermaster's Department during the year by the Ordnance Department 646 cast-iron heating stoves of adopted patterns, together with various extra parts (grates, &c.), required for repairs to these stoves, which had been manufactured at the Rock Island Arsenal upon the request of this office.

The cost of these stoves, together with the various extra parts (grates, &c.), was as follows:

87 No. 1 heaters (wood), at $9.60 each	$835 20
50 No. 1 heaters (wood), at $9.75 each	489 75
40 No. 2 heaters (wood), at $15.50 each	620 00
23 No. 3 heaters (wood), at $20.25 each	465 75
228 No. 6 heaters (coal), at $8.75 each	1,995 00
218 No. 7 heaters (coal), at $20 each	4,360 00
Various extra parts	310.99
Total	9,076 69

There were also purchased during the year 60 army parlor heaters at $18.75 each; and 36 army cooking ranges No. 2, at $95 each; and 20 army cooking ranges No. 1 at $72 each.

LIGHTS.

During the year there have been supplied to the Army 806 bracket lamps, single burner; 420 pendent lamp double burner (all of army pattern); 1,253 lanterns (oil, or oil and candle combined); and the requisite quantities of chimneys and wicks and the various extra parts required for expenditure with, and repairs to, lamps and lanterns.

The issue of lamps and lanterns during the year has been wholly from stock on hand.

During the year 256,000 gallons of mineral oil, of flash-point not lower than 135° F., and 20,000 gallons of flash point not lower than 150° F., have been purchased.

The expenditures on account of illuminating supplies for the year aggregate in round numbers $53,500. The appropriations are reimbursed by the amount of sales to officers.

MISCELLANEOUS CLAIMS AND ACCOUNTS.

At the beginning of the fiscal year 12,762 claims, amounting to $6,996,977.87, and 220 accounts, in amount $75,352.12, were on file; in the aggregate, 12,982 claims and accounts, amounting to $7,072,329.99; during the year 1,468 were received, amounting to $348,860.27; total claims and accounts, $7,421,190.26.

Sixty-four claims were approved for $4,301.51; 42 claims were referred to other Departments, by report or otherwise, amounting to $118,069.64; 324 claims were referred to the Third Auditor of the Treasury for action of the accounting officers, in amount $51,064.58; reduction on claims approved and referred, $10,548.87; 202 claims, amounting to $57,535.77, were rejected; 481 accounts, amounting to $37,713.07, were approved, being a reduction in the amount as presented of $1,188.41; 183 accounts were referred to other Departments to which they pertained, amounting to $55,413.25; 8 accounts were rejected, amounting to $690; total upon which final action has been taken during the fiscal year 1,304 claims and accounts, amounting to $336,525.10; 12,899 miscellaneous claims and 247 accounts remain on file, amounting to $7,084,665.16.

It will be seen by the foregoing statement that considerable increase is shown in the number of claims and accounts received during the past year over the previous year, which statement also shows by comparison a slight increase in the number of claims and accounts on hand at close of the year, though the total number of such claims and accounts acted upon and disposed of during the year has been greater.

MISCELLANEOUS SUBJECTS.

In addition to the labor involved in the examination and disposition of claims, &c., pertaining to the miscellaneous claims branch, numerous questions of a diversified character, submitted by officers and others for instructions and decisions, such as the rights of officers, under certain circumstances, to forage, to fuel, to transportation, hire of quarters, to reimbursement; the right of enlisted men to extra-duty pay, transportation, quarters, fuel, etc., and under what circumstances allowed, have been disposed of during the year.

It may be incidentally stated that but very few claims coming under the eight-hour law, and the law of February 28, 1867 (joint resolution), and known as 20 per cent. claims, have been presented during the past fiscal year.

POSTAGE-STAMPS.

The necessary instructions for furnishing, upon proper requisition therefor, the official postage-stamps of the War Department to all officers doing duty in the Quartermaster's Department, emanate directly from this branch, wherein a complete record of the requisition and the action taken thereon is kept.

Postage-stamps equal in value to $23,390.74 have been supplied during the fiscal year to all such officers.

BLANKS, BOOKS, ETC.

All the various forms of quartermasters' blanks used by officers of the department in the rendition of their property and money accounts, with books of record of public property "received and shipped," are supplied under instructions from this branch.

During the last fiscal year 2,289 requisitions for these blanks, books, &c., have been received from officers, briefed, recorded, and examined, and proper action taken thereon.

INCIDENTAL EXPENSE AND APPROPRIATION—ITS DISBURSEMENTS.

By act of Congress approved June 30, 1882 (Army bill), the sum of $911,000 was appropriated for incidental expenses of the Quartermaster's Department for the fiscal year ending June 30, 1883.

This sum was found adequate, under the reductions previously ordered, to meet every demand under that head, leaving, it is thought, a sufficient balance to liquidate all outstanding indebtedness properly chargeable to that appropriation.

The statement of miscellaneous claims appended to this report shows that there were on hand at close of the fiscal year ending June 30, 1882, 12,712 claims, amounting to $6,996,977.87.

These figures include claims for services and miscellaneous subjects, and small claims and vouchers for quartermasters' stores that have accumulated from time to time during and after the war at various offices of quartermasters throughout the country, and not being called for or prosecuted, have been filed in this office as the proper place for their deposit, and for reference and action when called up. Many, perhaps the greater part of these claims, are for services rendered to the Army during the rebellion. Sickness, capture, desertion, and the sudden movement to a new field of officers employing labor, have left very many men unpaid. The reports and returns of officers of the Quartermaster's Department on file at Washington afford the means of testing the validity of the claims.

The following statements exhibit the number and amount of transportation claims and accounts, and miscellaneous claims and accounts on hand July 1, 1882, the number and amount of those received, and the number and amount of those acted upon during the fiscal year ending June 30, 1883, and those remaining on hand.

Statement of accounts and claims in the transportation branch, Quartermaster-General's Office, for the fiscal year ending June 30, 1883.

	Number.	Amount.	Number.	Amount.
Accounts and claims suspended and awaiting action July 1, 1882	589	$1,511,611 60		
Accounts received during the fiscal year	1,801	1,535,928 04		
Claims received during the fiscal year	76	534,803 70		
Total accounts and claims on hand and received			2,466	$3,582,343 34
Accounts referred for settlement in the fiscal year	2,281	3,071,928 51		
Claims referred for settlement in the fiscal year	45	102,049 41		
Accounts and claims rejected in the fiscal year	43	216,175 74		
Accounts and claims suspended in the fiscal year	56	186,077 82		
Total accounts and claims referred, rejected, and suspended in the fiscal year			2,425	3,576,231 48
Accounts awaiting action on July 1, 1883	33	5,560 86		
Claims awaiting action on July 1, 1883	8	551 00		
Total number and amount			41	6,111 86

Statement of miscellaneous claims and accounts in the Quartermaster-General's Office for the fiscal year ending June 30, 1883.

	Number.	Amount.	Number.	Amount.
On hand July 1, 1882, which had previously been suspended or had received no decisive action—				
Claims, 12,762 $6,996,977 87				
Accounts, 220 75,352 12				
	12,982	$7,072,329 99		
Number of claims received during the fiscal year	769	252,361 33		
Number of accounts received during the fiscal year	699	96,498 94		
Total number on hand and received			14,450	$7,421,190 26
Claims approved	64	4,301 51		
Claims referred to other Departments	42	118,069 64		
Claims referred to Third Auditor for action of accounting officers	324	51,064 58		
Reduction on claims approved and referred		10,548 87		
Claims rejected	202	57,535 77		
Accounts approved	481	37,713 07		
Reduction on accounts approved		1,188 41		
Accounts referred to other Departments	183	55,413 25		
Accounts rejected	8	690 00		
Total upon which final action has been taken			1,304	336,525 10
Remaining on hand July 1, 1883—				
Claims	12,899	7,007,818 83		
Accounts	247	76,846 33		
Total number and amount			13,146	7,084,665 16

The following-described papers accompany this report:

A.—Statement of all troops and property transported under direction of the Quartermaster's Department during the year ending June 30, 1883.

B.—Statement showing the principal movements of troops during the fiscal year ending June 30, 1883, and average length of march or movement in each case.

C.—Abstract of contracts for wagon transportation entered into by the Quartermaster's Department during the year ending June 30, 1883.

D.—Abstract of contracts for water transportation for the fiscal year ending June 30, 1883.

E.—Statement of vessels owned and purchased by the Quartermaster's Department during the fiscal year ending June 30, 1883.

F.—Statement of vessels chartered, impressed, or employed by the Quartermaster's Department during the year ending June 30, 1883.

G.—Circular embodying rules and regulations regarding certain transportation and the settlement of accounts arising therefrom.

H.—Statement showing cost of transportation of the Army, and the number of persons and pounds of freight transported during the fiscal year.

I.—Copy of letter of the Solicitor of the Treasury in relation to suit brought against certain indebted railroad companies.

I am, general, very respectfully, your obedient servant,

J. G. CHANDLER,
Deputy Quartermaster-General, U. S. A.

Brig. Gen. S. B. HOLABIRD,
Quartermaster-General, U. S. A.

A.—*Statement of all troops and property transported under direction of the Quartermaster's Department during the fiscal year ending June* 30, 1883.

Kind of transportation.	Passengers.			Beasts.			
	Officers.	Men.	Total.	Horses.	Mules.	Cattle.	Total.
Railroad	1,759	28,441	30,200	2,760	2,699	.....	5,459
Water	979	30,410	31,389	359	461	.....	820
Stage	665	2,912	3,577	.....	.....	.....	.....
Grand total	3,403	61,763	65,166	3,119	3,160	.....	6,279

Kind of transportation.	Stores.					
	Subsistence.	Quartermaster's.	Ordnance.	Medical.	Miscellaneous.	Total.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Railroad	46,319,403	84,553,957	9,361,782	1,447,807	11,008,919	152,691,868
Water	7,138,868	7,425,479	3,809,082	312,441	3,231,861	21,917,731
Wagon	23,186,201	24,205,988	4,306,267	944,377	10,605,713	63,248,546
Stage	320	5,170	.....	2,998	4,591	13,079
Grand total	76,644,792	116,190,594	17,485,131	2,707,623	24,843,084	237,871,224

Respectfully submitted.

J. G. CHANDLER,
Deputy Quartermaster-General, U. S. A.

QUARTERMASTER-GENERAL'S OFFICE, *September* 20, 1883.

B.—*Table showing principal movements of troops during fiscal year ending June 30, 1883, and average length of march or movement in each case.*

Organization.	Company.	From—	To—	Stations before movement.	Stations after movement.	Distance.	Average length of march or movement in each case.
						Miles.	*Miles.*
Third Artillery	F	Department of the South	Department of Texas	Saint Augustine, Fla	San Antonio, Tex	1,269	1,269
Fourth Artillery	F	Department of the East	Department of Dakota	Fort Warren, Mass	Fort Snelling, Minn	1,443	1,443
Fifth Artillery	D	do	Department of the Platte	Fort Schuyler, N. Y	Fort Omaha, Neb	1,406	1,406
Seventh Infantry	Headq'rs	Department of Dakota	do	Fort Snelling, Minn	Fort Laramie, Wyo	970	
	A	do	do	Fort Pembina, Dak	Fort D. A. Russell, Wyo	1,282	
	B	do	do	Fort Abraham Lincoln, Dak	Fort Fred Steele, Wyo	675	
	C	do	do	Fort Snelling, Minn	Fort D. A. Russell, Wyo	887	
	D	do	do	Cantonment Bad Lands, Dak	Fort Laramie, Wyo	613	
	E	do	do	Fort Pembina, Dak	Fort Bridger, Wyo	1,680	961
	F	do	do	Fort Abraham Lincoln, Dak	Fort Laramie, Wyo	408	
	G	do	do	Fort Stevenson, Dak	Fort Fred Steele, Wyo	750	
	H	do	do	Fort Snelling, Minn	Fort D. A. Russell, Wyo	887	
	I	do	do	Fort Stevenson, Dak	Fort Laramie, Wyo	483	
	K	do	do	Fort Snelling, Minn	do	970	
Twelfth Infantry	Headq'rs	Department of Arizona	Department of the East	Whipple Barracks, Ariz	Madison Barracks, N. Y	2,564	
	A	do	do	Fort Mojave, Ariz	do	2,731	
	B	do	do	Whipple Barracks, Ariz	do	2,564	
	C	do	do	Fort Thomas, Ariz	do	2,566	
	D	do	do	Fort Apache, Ariz	do	2,573	
	E	do	do	Camp Price, Ariz	Fort Niagara, N. Y	2,372	2,602
	F	do	do	Whipple Barracks, Ariz	Madison Barracks, N. Y	2,564	
	G	do	do	Fort McDowell, Ariz	do	2,730	
	H	do	do	Fort Lowell, Ariz	Plattsburg Barracks, N. Y	2,819	
	I	do	do	Fort Bowie, Ariz	do	2,753	
	K	do	do	Fort Huachuca, Ariz	Fort Niagara, N. Y	2,391	
Fifteenth Infantry	Headq'rs	Department of the Missouri	Department of Dakota	Fort Lewis, Colo	Fort Randall, Dak	1,097	
	A	do	do	do	do	1,097	
	B	do	do	Fort Garland, Colo	Fort Pembina, Dak	1,611	
	C	do	do	Fort Lyon, Colo	Fort Randall, Dak	657	
	D	do	do	do	do	657	
	E	do	do	Fort Lewis, Colo	Fort Stevenson, Dak	2,029	
	F	do	do	do	do	2,029	1,410
	G	do	do	do	Fort Abraham Lincoln, Dak	1,964	

	H	....do	....do	....do	Fort Randall, Dak	1,007	
	I	....do	....do	Fort Marcy, N. Mex	Fort Pembina, Dak	1,769	
	K	....do	....do	Fort Lyon, Colo	Fort Abraham Lincoln, Dak	1,514	
Twenty-second Infantry	Headq'rs	Department of Texas	Department of the Missouri	Fort Clark, Tex	Fort Lewis, Colo	2,025	
	A	....do	....do	San Antonio, Tex	Fort Garland, Colo	1,667	
	B	....do	....do	Fort Clark, Tex	Fort Lewis, Colo	2,025	
	C	....do	....do	....do	Fort Lyon, Colo	1,654	
	D	....do	....do	Fort Duncan, Tex	Fort Lewis, Colo	2,558	
	E	....do	....do	San Antonio, Tex	Fort Marcy, N. Mex	1,238	1,860
	F	....do	....do	Fort Duncan, Tex	Fort Lyon, Colo	1,687	
	G	....do	....do	Fort Clark, Tex	Fort Lewis, Colo	2,025	
	H	....do	....do	San Antonio, Tex	....do	1,903	
	I	....do	....do	Fort Clark, Tex	Fort Lyon, Colo	1,654	
	K	....do	....do	....do	Fort Lewis, Colo	2,025	

Respectfully submitted.

J. G. CHANDLER,
Deputy Quartermaster-General, U. S. A.

C.—*Abstract of contracts for wagon transportation, entered into by the Quartermaster's Department, received at the office of the Quartermaster-General during the fiscal year ending June 30, 1883.*

Contracting officer.	Contractor.	Date of contract.	Route of supply.	Rates.	Date of expiration of contract.
Lieut. Col. H C. Hodges, depot quartermaster, New York City.	Abram Winters and Solon Winterbottom	June 26, 1883	Hauling in and around New York City	Various	June 30, 1884
Maj. W. B. Hughes, quartermaster, Philadelphia, Pa.	William J. Crawford	June 27, 1882	Hauling in and around Philadelphia, Pa	....do	June 30, 1883
Col. James A. Ekin, assistant quartermaster-general, Jeffersonville, Ind.	William S. Jacobs	June 20, 1883	Hauling in and around Jeffersonville, Ind.	....do	June 30, 1884
Col. S. B. Holabird, assistant quartermaster-general, Philadelphia, Pa.	William J. Crawford	June 13, 1883	Hauling in and around Philadelphia, Pa.	....do	June 30, 1884
Capt. M. J. Grealish, acting assistant quartermaster, Augusta Arsenal, Georgia.	Anne Wood	June 4, 1883	Hauling in and around Augusta Arsenal, Georgia.	....do	June 30, 1884
Lieut. Col. J. D. Bingham, chief quartermaster, Fort Leavenworth, Kans.	Edward Fenlon	June 2, 1882	Route No. 1: Between Rawlins, Wyo., and camp at White River Agency, Colo., 144 miles.	$2.40 per 100 pounds for the whole distance	June 30, 1883
Do	....do	June 2, 1882	Route No. 2: Between Gunison City, Colo., and Cantonment, on the Uncompahgre River, Colorado, 80 miles.	$3.20 per 100 pounds for the whole distance	June 30, 1883
Do	....do	June 2, 1882	Route No. 3: Durango, Colo., and Fort Lewis, Colo., 12 miles.	$1 per 100 pounds for the whole distance	June 30, 1883
Do	M. Brunswick	June 2, 1882	Route No. 4: Between Las Vegas, N. Mex., and Fort Stanton, N. Mex., 182 miles.	$2.50 per 100 pounds for the whole distance	June 30, 1883
Do	Edward Fenlon	June 2, 1882	Route No. 6: Between Gainesville, Tex., and Fort Sill, Ind. T., 116 miles.	$1.20 per 100 pounds for the whole distance	June 30, 1883
Do	....do	June 2, 1882	Route No. 7: Between Caldwell, Kans., and Fort Reno, Ind. T., 111 miles.	90 cents per 100 pounds for the whole distance	June 30, 1883
Lieut. Col. J. D. Bingham, chief quartermaster Department of the Missouri, Fort Leavenworth, Kans.	W. M. D. Lee	June 2, 1882	Route No. 8: Between Dodge City, Kans., and Fort Elliott, Tex., 165 miles.	$2.19 per 100 pounds for the whole distance	June 30, 1883
Do	Samuel Fairfield	May 21, 1883	Route No. 1: Between Rawlins, Wyo., and camp at White River agency, Colorado.	$2.08 per 100 pounds for the whole distance, and $1.49½ per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	J. W. Seger	May 1, 1883	Route No. 2: Between Caldwell, Kans. and Fort Reno, Ind. T.	Ninety-one cents (91c.) per 100 pounds for the whole distance, and 87 cents per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884

Do	W. H. Chick	May 1, 1883	Route No. 4: Between Las Vegas, N. Mex., and Fort Stanton, N. Mex.	$2 per 100 pounds for the whole distance, and $2 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	Bernard W. Maguire	May 1, 1883	Route No. 5: Between Deming, N. Mex., and Fort Bayard, N. Mex.	$1 per 100 pounds for the whole distance	June 30, 1884
Do	Henry G. Robinson	May 1 1883	Route No. 6: Between Henrietta, Tex., and Fort Sill, Ind. T.	37½ cents per 100 pounds for the whole distance and $1.35 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Col. C. H. Tompkins, chief quartermaster, Chicago, Ill.	Wm. E. Webster	June 23, 1882	Hauling in and around Chicago, Ill.	Various	June 30, 1883
Lieut. Col. M. I. Ludington, chief quartermaster Department of the Platte, Omaha, Nebr.	J. N. Russell	May 2, 1882	Between Milford, Utah, and Fort Cameron, Utah, 35 miles.	75 cents per 100 pounds for the whole distance	June 30, 1883
Maj. G. B. Dandy, chief quartermaster Department of the Platte, Omaha, Nebr.	C. E. Clay	May 10, 1883	Between Rock Creek, Wyo., and Fort McKinney, Wyo.	$2.74 per 100 pounds for the whole distance, and $1.20 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	E. J. Baker and Iver Johnson.	May 10, 1883	Between Cheyenne Depot, Wyo., and Fort McKinney, Wyo.	$4.25 per 100 pounds for the whole distance, and $1.30 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 20, 1884
Do	John H. Arnold	June 1, 1883	Between Carter, Wyo., and Fort Thornburg, Wyo.	$3 per 100 pounds for the whole distance, and $3 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	George H. Jewett	May 10, 1883	Between Sidney, Nebr., and Fort Robinson, Nebr.	$1.20 per 100 pounds for the whole distance, and $1 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	John H. Arnold	May 10, 1883	Between Fort Fred Steele, Wyo., and Fort Washkie, Wyo.	$1.84 per 100 pounds for the whole distance, and $1.33⅓ per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Capt. Charles Bird, acting chief quartermaster, Department of Dakota, Fort Snelling, Minn.	Fred. T. Evans	Apr. 1, 1883	Route in Minnesota or Dakota	$1.40 per 100 pounds per 100 miles	June 30, 1883
Do	William S. Wetzel	Apr. 1, 1883	Route in Montana	$1.47 per 100 pounds per 100 miles for April and May, and $1.50 for June, 1883.	June 30, 1883
Col. R. Saxton, chief quartermaster, Department of California, Presidio of San Francisco, Cal,	D. W. Earl	Apr. 19, 1883	Route No. 1: Between Reno, Nev., and Fort Bidwell, Cal., 250 miles.	$2.60 per 100 pounds for the whole distance, and $1.50 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	Nathan Delbanco	Aug. 11, 1882	Route No. 2: Between Winnemucca, Nev., and Boise Barracks, Idaho, 270 miles.	$4.50 per 100 pounds for the whole distance for July, August, September, and October, 1882, April, May, and June, 1883, and $5.85 for November and December, 1882, January, February, and March, 1883.	June 30, 1883

C.—*Abstract of contracts for wagon transportation, entered into by the Quartermaster's Department, &c.*—Continued.

Contracting officer.	Contractor.	Date of contract.	Route of supply.	Rates.	Date of expiration of contract.
Col. R. Saxton, chief quartermaster, Department of California, Presidio of San Francisco, Cal.	Nathan Delbanco	May 4, 1883	Between Winnemucca, Nev., and Fort McDermit.	$2.00 per 100 pounds for the whole distance	June 30, 1884
Lieut. C. A. Earnest, Eighth Infantry, post quartermaster, Fort Bidwell, Cal.	Irvin Ayers	May 8, 1882	Between Fort Bidwell, Cal., and Fort Walla Walla, Wash.	22 cents per pound for the whole distance	June 30, 1883
Maj. J. G. C. Lee, chief quartermaster, Department of Texas, San Antonio, Tex.	Jackson E. Labatt	May 28, 1883	Between Abilene, Tex., and Fort Concho, Tex.	93¾ cents per 100 pounds for the whole distance, and $1.09 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1883
Maj. A. J. McGonnigle, chief quartermaster, Department of Arizona, Whipple Barracks, Prescott, Ariz.	Gus Ellis	June 1, 1882	Route No. 1: Between Maricopa, Ariz., and Fort McDowell, Ariz., 51 miles.	1.06\frac{25}{100}$ per 100 pounds for the whole distance	June 30, 1883
			Between Maricopa, Ariz., and Whipple Barracks, Ariz., 162 miles.	3.38\frac{75}{100}$ per 100 pounds for the whole distance	
			Between Maricopa, Ariz., and Fort Verde, Ariz., 208 miles.	4.34\frac{75}{100}$ per 100 pounds for the whole distance	
Maj. A. J. McGonnigle, chief quartermaster Department of Arizona, Whipple Barracks, Prescott, Ariz.	William S. Head	June 1, 1882	Route No. 2: Between Holbrook, Ariz., and Fort Apache, Ariz., between the nearest shipping point on the Atlantic and Pacific Railroad and Fort Mojave, Fort Verde, Whipple Barracks, and Fort McDowell.	$2.45 per 100 pounds per 100 miles	June 30, 1883.
Do	Isadir E. Solomon	June 1, 1882.	Route No. 6: Between Bowie Station and Fort Bowie, 14 miles.	28 cents per 100 pounds for the whole distance	June 30, 1883.
			Between Bowie Station and Fort Grant, 38 miles.	42$\frac{11}{14}$ cents per 100 pounds for the whole distance.	
			Between Bowie Station and Fort Thomas, 65 miles.	73 cents per 100 pounds for the whole distance	
Do	William S. Head	May 1, 1883.	Route No 1: Between Maricopa Ariz., and Fort McDowell, 46 miles.	$1.35 per 100 pounds for the whole distance	June 30, 1884.
			Between Maricopa, Ariz., and Fort Whipple Depot, 129 miles.	$4.05 per 100 pounds for the whole distance	
			Between Maricopa, Ariz., and Fort Verde, 130 miles.	$4.10 per 100 pounds for the whole distance, and $3.00 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	
Do	Samuel C. Miller	May 1, 1883.	Route No. 2: Between Ash Fork, Ariz., and Whipple Depot, 56 miles.	$1.12 per 100 pounds for the whole distance	June 30, 1884.
			Between Ash Fork, Ariz., and Fort Verde, 81 miles.	$1.60 per 100 pounds for the whole distance	

			Between Ash Fork, Ariz., and Fort McDowell, 185 miles.	$4.12 per 100 pounds for the whole distance.....	
			Between Ash Fork, Ariz., and Fort Apache, 90 miles.	$1.80 for 100 pounds for the whole distance, and $2.40 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	
Do	Adolph Solomon.....	May 17, 1883.	Route No. 3: Between Bowie Station and Fort Bowie, 14 miles.	28 cents per 100 pounds for the whole distance...	June 30, 1884.
			Between Bowie Station and Fort Grant, 44 miles.	49½ cents per 100 pounds for the whole distance.	
			Between Bowie Station and Fort Thomas, 66 miles.	72½ cents per 100 pounds for the whole distance.	
			Between Bowie Station and Fort San Carlos, 101 miles.	$1.21½ per 100 pounds for the whole distance; and $1.73½ per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	
Do	Isidor E. Solomon.....	Apr. 21, 1883.	Special wagon contract.....	Four-animal teams and wagons $8 per day; six-animal teams and wagons $10 per day.	
Maj. E. D. Baker, chief quartermaster, Department of the Columbia, Vancouver Barracks, Wash.	Newman Fisher	May 9, 1882	Between southern terminus Oregon and California Railroad and Fort Klamath, Oreg., 214 miles.	$1.91½ per 100 pounds per 100 miles for July, August, September, and October, 1882, May and June, 1883, and $1.27 for November and December, 1882, January, February, March, and April, 1883.	June 30, 1883
Do	W. J. Snodgrass and T. F. Miner	June 13, 1882	Between Pendleton, Oreg., and Boise Barracks, Idaho, 253 miles.	$1.40 per 100 pounds per 100 miles for July, August, September, and October, 1882, May and June, 1883, and $2.80 for November and December, 1882, January, February, March, and April, 1883.	June 30, 1884
Capt. A. S. Kimball, assistant quartermaster, Portland, Oreg.	Hosea B. Eastman	Apr. 30, 1883	Between Pendleton, Oreg., and Boise Barracks, Idaho.	$3.92 per 100 pounds for the whole distance, and $1.75 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	Newman Fisher	Apr. 16, 1883	Between southern terminus Oregon and California Railroad and Fort Klamath, Oreg.	$7.50 per 100 pounds for the whole distance, and $4.50 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	J. Monaghan.....	Apr. 18, 1883	Between Spokane Falls, W. T., and Fort Spokane, W. T.	$1.49 per 100 pounds for the whole distance, and $2.48 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884
Do	W. H. Ridenbaugh....	Apr. 30, 1883	Between Shoshone Station, Ind. T., and Boise Barracks, Ind. T.	$3 per 100 pounds for the whole distance, and $2 per 100 pounds per 100 miles between any and all other points within the boundaries of the route.	June 30, 1884

Respectfully submitted.

J. G. CHANDLER,
Deputy Quartermaster-General, U. S. A.

QUARTERMASTER-GENERAL'S OFFICE, *September* 20, 1883.

D.—*Abstract of contracts for water transportation entered into by the Quartermaster's Department, received at the Quartermaster-General's Office, during the fiscal year ending June 30, 1883.*

Names of officers.	Names of contractors.	Date of contract.	Route of supply.	Rates.	Date of expiration of contract.
Capt. Charles Bird, assistant quartermaster.	Edward D. Comings	Apr. 11, 1883	From Yankton, Dak., to Bismarck, Dak., and intermediate points.	Schedule rates	Nov. 1, 1883
Maj. E. D. Baker, quartermaster.	L. A. Loomis	May 10, 1882	Between Astoria, Oreg., and Fort Stevens, Oreg., and Fort Canby, Wash.	$650 per month; $9 per hour for detention at Fort Stevens; $9 per hour for detention at Ilwaco; $6 per hour for detention at Fort Canby; $25 for extra trip to Fort Stevens; $30 for extra trip to Fort Canby.	June 30, 1883
Capt. A. S. Kimball, assistant quartermaster.	L. A. Loomis	Apr. 16, 1883	Between Astoria, Oreg., and Fort Stevens, Oreg., and Fort Canby, Wash.	$675 per month; $9 per hour for detention at Fort Stevens; $6 per hour for detention at Fort Canby; $9 per hour for detention at Ilwaco; $30 for extra trip to Fort Stevens; $30 for extra trip to Fort Canby.	June 30, 1883

Respectfully submitted.

J. G. CHANDLER,
Deputy Quartermaster-General, U. S. A.

B.—Statement of vessels owned or purchased by the Government and employed in the Quartermaster's Department during the fiscal year ending June 30, 1883.

Name.	Class.	Tonnage.	When purchased or built.	Estimated cost or value.	By whom employed.	Where employed.	Amount paid for repairs.	Amount paid for running expenses.	Total expenses.
Chester A. Arthur	Steamer	178.70	June 30, 1876	$26,000 00	Lieut. Col. H. C. Hodges, Deputy Quartermaster-General.	New York Harbor	$3,924 80	$12,392 50	$16,317 30
Ordnance	Propeller	75.00	June 30, 1876	18,000 00	Ordnance Board, U. S. Army	do	10,921 48	6,428 48	17,449 96
Atlantic	Steam-tug	60.31	Oct. 15, 1878	13,865 56	Post quartermaster	Governor's Island, N. Y. H.	2,540 60	9,609 71	12,150 31
Resolute	do	70.30	Nov. 14, 1879	17,947 46	do	Boston Mass	5,753 43	8,153 81	13,907 24
Monroe	Steam-launch	62.35	Nov. 30, 1875	15,200 00	do	Fort Monroe, Va	440 49	2,690 13	3,130 62
Thayer	do	32.36	Oct. 8, 1874	7,200 00	do	Fort Adams, R. I	1,012 85	2,930 93	3,943 78
General Greene	do	25.20	Mar. 3, 1874	5,250 00	do	Fort McHenry, Md	473 66	850 45	1,324 11
General Jesup	do	19.37	June 30, 1874	5,000 00	do do Chief quartermaster, Department of the East.	Fort Schuyler, N. Y. H. Fort Hamilton, N. Y. H. Governor's Island, N. Y. H.	1,346 72	1,455 00	2,801 72
Barrancas	do	28.01	Nov. 7, 1874	5,750 00	Post quartermaster	Fort Barrancas, Fla	314 52	2,145 00	2,459 52
Matchless	Schooner	120.00	June 5, 1863	13,500 00	do	Key West, Fort Brooke, and Fort Barrancas, Fla.	393 24	4,334 00	4,727 24
Belle of the Bay	Sloop	16.00	July 25, 1882	275 00	do	Saint Francis Barracks, Fla.			
Hamilton	Steam-launch	37.68	Feb. 1, 1875	7,800 00	Depot quartermaster	David's Island, N. Y. H.	804 12	3,679 92	3,984 04
General McPherson	Propeller	104.23	Sept. 1, 1867	40,000 00	Col R. Saxton, Assistant Quartermaster-General.	San Francisco, Cal	15,562 96	19,604 38	35,167 34
Dispatch	Steam-launch	15.00	Nov. 28, 1879	3,510 00	Capt. G. C. Smith, assistant quartermaster.	Vancouver Depot, Wash	1,150 97	1,406 78	2,557 75
Amelia Wheaton	do	40.00	Aug. 24, 1880	8,000 00	Lieut. S. E. Clark, Second Infantry	Ft. Cœur d'Alene, Idaho		312 25	312 25
General Sherman*	Steamboat	236.72	Apr. 30, 1877	19,394 02	Capt. E. B. Kirk, assistant quartermaster. Depot quartermaster	Missouri and Yellowstone Rivers. Saint Louis, Mo		7,573 55 3,301 00	10,874 55
Lillie Lee	Steam-launch	40.00	July 23, 1879	2,500 00	Post quartermaster, Fort Totten, Dak.	Devil's Lake	4 95		4 95
							44,144 79	86,967 89	131,112 68

* Sold November 8, 1882, for $5,300.

Respectfully submitted.

J. G. CHANDLER,
Deputy Quartermaster-General, U. S. Army.

F.—*Statement of vessels chartered, impressed, or employed by the Quartermaster's Department during the fiscal year ending June 30, 1883.*

Name.	Class.	Tonnage.	When chartered.	Period of service.		Where charter-money is payable.	By whom put in service, or employed.	Rate of pay.	Amount paid.	Total earnings.
				From—	To—					
Mattie Sargent	Steam tug	35.16	Dec. 7, 1882	Dec. 7, 1882	Dec. 8, 1882	Boston, Mass	Post quartermaster	$30 per day	$60 00	$60 00
Elsie	do	49.10	Feb. 10, 1883	Feb. 10, 1883	Feb. 22, 1883	do	do	$30 per day	380 00	380 00
Ida M. Dalby	do	67.99	Mar. 10, 1883	Mar. 10, 1883	Mar. 10, 1883	do	do	$30 per day	10 00	10 00
Orion	Steam launch	25.00	Mar. 12, 1883	Mar. 12, 1883	Mar. 24, 1883	Baltimore, Md	Post quartermaster, Fort McHenry, Md.	$6 per day	72 00	
Do	do	25.00	Apr. 30, 1883	Apr. 30, 1883	Apr. 30, 1883	do	do	$6 per day	6 00	132 00
Do	do	25.00	May 1, 1883	May 1, 1883	May 8, 1883	do	do	$6.75 per day	54 00	
Favorite	Sloop	6.50	July 1, 1877	July 1, 1882	June 30, 1883	Fort Adams, R. I	Post quartermaster	$1 per 1,000 lbs	1,066 76	1,066 76
Jamestown	Ferry-boat	115.06	June 16, 1883	June 18, 1883	June 30, 1883	do	do	$5 per day	65 00	65 00
Woodworth	Steam tug	(*)	June 20, 1883	June 21, 1883	June 30, 1883	Governor's Island, New York Harbor.	do	$15 per day		150 00
Native	Sloop	8.00	Nov. 15, 1876	July 1, 1882	June 30, 1883	New Orleans, La	Lieut. F. B. Jones, Third Infantry.	$25 per month	300 00	300 00
Nellie	do	6.00		July 1, 1882	June 30, 1883	do	Depot quartermaster	$20 per month	240 00	240 00
Thomas Kiley	Steamer	67.12	Aug. 12, 1882	Aug. 12, 1882	Nov. 20, 1882	New York City	Lieut. Col. H. C. Hodges, deputy quartermaster-general.	$60 per day	6,642 96	†6,642 96
Do	do	67.12	Dec. 20, 1882	Dec. 20, 1882	Dec. 26, 1882	do	do	$60 per day	461 22	†461 22
Do	do	67.12	Jan. 30, 1883	Jan. 30, 1883	Feb. 5, 1883	do	do	$60 per day	461 21	†461 21
Do	do	67.12	Mar. 19, 1883	Mar. 19, 1883	Mar. 31, 1883	do	do	$60 per day	823 61	†823 61
Do	do	67.12	Apr. 1, 1883	Apr. 1, 1883	Apr. 23, 1883	do	do	$60 per day	1,515 44	†1,515 44
Do	do	67.12	May 30, 1883	May 30, 1883	May 30, 1883	do	do	$73 per day	73 00	†73 00
Do	do	67.12	June 19, 1883	June 19, 1883	June 21, 1883	do	do	$60 per day	197 67	†197 67
Sonoma	do	179.00	July 24, 1882	July 24, 1882	July 28, 1882	Presidio San Francisco, Cal.	Capt. C. F. Humphreys, assistant quartermaster.	$40 per day	160 00	160 00
No Name	Lighter	(*)	Sept. 9, 1882	Sept. 9, 1882	Sept. 22, 1882	do	do	$10 per day	130 00	130 00
Kate	Steam tug	21.79	Sept. 19, 1882	Sept. 19, 1882	Sept. 19, 1882	do	do	$50 per day	50 00	50 00
Edith	Steamer	74.01	May 8, 1883	May 8, 1883	May 8, 1883	do	do	$50 per trip	50 00	50 00
Neptune	Steam tug	116.00	Sept. 15, 1882	Sept. 15, 1882	Sept. 15, 1882	San Francisco, Cal	Maj. G. H. Weeks, depot quartermaster.	$125 per trip	125 00	125 00
Millen Griffith	do	(*)	Nov. 10, 1882	Nov. 10, 1882	Nov. 10, 1882	do	do	$50 per trip	50 00	50 00
Edith	do	74.01	Nov. 24, 1882	Nov. 24, 1882	Dec. 6, 1882	do	do	$100 per day	1,100 00	1,100 00
Water Nymph	Water-boat	13.00	Dec. 2, 1882	Dec. 2, 1882	Dec. 2, 1882	do	do	$50 per trip	100 00	100 00
Do	do	13.00	Dec. 5, 1882	Dec. 5, 1882	Dec. 5, 1882	do	do			
Sonoma	Steamer	179.00	Apr. 2, 1883	Apr. 2, 1883	Apr. 6, 1883	do	do	$33⅓ per day	2,256 00	2,256 00
Do	do	179.00		Apr. 10, 1883	June 16, 1883	do	do			

Lulu D	do	245.04	Sept. 11, 1882	Sept. 11, 1882	Sept. 15, 1882	Brownsville, Tex	Capt. C. W. Williams, assistant quartermaster.	$200 per day	1,000 00	3,200	
Do	do	245.04	Sept. 11, 1882	Sept. 16, 1882	Sept. 29, 1882	do	do	$150 per day	2,100 00		
Do	do	245.04	Sept. 11, 1882	Sept. 30, 1882	Oct. 1, 1882	do	do	$100 per day	100 00		
									19,649 87	19,799 87	

* Unknown.

† Includes hire of engineer and fireman.

‡ Includes wages of crew.

Respectfully submitted.

J. G. CHANDLER,
Deputy Quartermaster General, U. S. A.

G.—*Circular embodying rules and regulations regarding certain transportation and the settlement of accounts.*

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., August 15, 1883.

The attention of officers on duty in the Quartermaster's Department is called to the following regulations governing the transportation of public property pertaining to the Treasury, Interior, and Navy Departments, &c., by the Quartermaster's Department.

When called on by properly accredited representatives of the Departments or institutions named herein, officers are expected to give all necessary information as to shipments, and to forward such property as may be turned over for shipment under these regulations, with the same care and despatch as required in case of shipments of property pertaining to the Bureaus of the War Department.

REGULATIONS.

Paragraph 1959. "The Quartermaster's Department will take charge of, consign, and ship through to destination all freight that may be delivered to that department by the authorized agents of the Treasury or Navy Department for transportation, and all freight that may be delivered to it by authorized agents of the Interior Department, excepting the annual supplies of Indian goods, such freight to be securely packed by the Treasury, the Navy, or Interior Department, and properly marked with address of consignee in each case."

Officers of the Quartermaster's Department are instructed to use separate bills of lading in making these shipments, and to insert the following notation thereon: "Payable by the Secretary of the Treasury or by the Secretary of the Navy or by the Secretary of the Interior; to be made into an account and forwarded for settlement on presentation to any officer of the Quartermaster's Department."

The funds of the Quartermaster's Department will not be used in paying any of the expenses incident to the transportation of this freight, but its officers will prepare the accounts when the bills of lading are presented to them and forward them to the Quartermaster-General's Office, to be sent to the Treasury or Navy or Interior Department for payment.

In making up the accounts the same plan as to deduction on account of land-grant railroads will be pursued as in making up accounts for transportation of other Government property. (G. O. 66, 1876; G. O. 90, 1879; G. O. 9, 1880.)

GENERAL ORDERS 138, 1882.

By direction of the Secretary of War paragraphs 1962 and 1963 of the Regulations are annulled, and paragraph 1961 is amended to read as follows:

1961. The Quartermaster's Department is authorized to receive from officers and other persons, and forward to their respective destinations under the regulations governing the transportation of military property, and on the same form of bills of lading, articles donated by persons to the following institutions, viz:

The Medical Museum and the National Museum at Washington. Packages to be marked, respectively, "Medical Museum" or "National Museum, care of Depot Quartermaster, Washington, D. C."

The Library and Museum of the Military Service Institution at Governor's Island, New York, N. Y.

The United States Military Academy at West Point, New York. Packages to be marked "United States Military Academy, West Point, New York, care of Post Quartermaster."

Transportation is provided by the Quartermaster's Department for the following Bureaus or Divisions of the departments named, under the authority of Army Regulations 1959, above quoted:

Of the Treasury Department: Customs, Mint, Internal Revenue, Light-house, Life-Saving, Revenue Marine, Marine Hospital, Independent Treasury, Steamboat Inspection.

Of the Navy Department: Yards and Docks, Navigation, Ordnance, Provisions and Clothing, Medicine and Surgery, Equipment and Recruiting, Naval Observatory, Marine Corps.

Of the Interior Drpartment: General Land Office, Indian Bureau, Geological Survey.

As settlements for such service are made from appropriations of the Bureaus for which the transportation is performed respectively, it is necessary that all such accounts

should be forwarded promptly to this office; thence to the Secretary of War; thence to the Secretary of the proper Department; thence to the proper Bureau of that Department; thence to the proper Auditor of the Treasury, and thence to the proper Comptroller. Payment is ultimately made by a Treasury check, which in turn must be sen through the offices of the accounting officers, the Register's Office, and the Warrant Division of the Treasury.

S. B. HOLABIRD,
Quartermaster-General, U. S. A.

Official:

J. G. CHANDLER,
Deputy Quartermaster-General, U S. A.

H.—*Statement showing cost of transportation of the Army, including expenses for rail, water wagon, and stage transportation; for purchase of transportation animals; for purchase and repair of army and spring wagons, ambulances, harness, &c.; for hire of transportation agents, teamsters, &c.; for supplying posts with water and digging wells; for purchasing, repairing, and operating vessels; for building and repairing wharves and wharfage, and for clearing roads, and removing obstructions from roads, harbors, and rivers, during fiscal year ending June 30, 1883. Prepared from reports of disbursing officers at each quartermaster's depot and in each military department; together with a statement of the number of persons and pounds of freight transported under direction of the Quartermaster's Department during the fiscal year.*

Appropriated by Congress, act June 30, 1882 ..... $4,164,000

Respectfully submitted.

J. G. CHANDLER,
Deputy Quartermaster-General, United States Army.

QUARTERMASTER-GENERAL'S OFFICE, *August* —, 1883.

RAIL TRANSPORTATION.

[Fiscal year ending June 30, 1883.]

t or department.	Payments made for passenger transportation to June 30, 1883.	Payments made for freight transportation to June 30, 1883.	Outstanding unpaid railroad accounts, June 30, 1883.	Total expenditure for the service during the fiscal year.	Number of persons transported by the Quartermaster's Department during fiscal year.	Pounds of freight transported by the Quartermaster's Department during the fiscal year.
ton, D. C	$8,250 47	$4,232 18	$2,140 11	$14,622 76	401	1,240,598
k City	34,245 75	7,316 54	6,500 00	48,062 29	1,781	3,082,023
hia, Pa	3,574 29	2,479 75	175 00	6,229 04	24	1,490,350
ville, Ind					138	3,494,150
, Ky	3,018 21	13,767 33	3,784 79	20,570 33		
Ill	27,850 62	40,576 57	29,498 70	97,925 89	145	15,082,303
is, Mo	62,199 79	65,381 11	52,585 60	180,166 50	2,908	6,589,056
cisco, Cal	443 35	1,776 91	1,090 45	3,310 71	551	7,886,717
	2,381 42	7,070 00	2,389 90	11,841 32	434	2,511,509
h	88 35	234 04	1,842 47	2,164 86	284	212,045
					486	277,925
	2,628 93	5,383 60	6,200 00	14,212 53	4,202	52,805,298
	45,943 59	42,464 29	48,000 00	136,407 88	6,018	13,883,659
ouri	93,361 49	133,597 87	91,645 54	318,604 90	5,467	26,732,257
	6,214 39	14,918 93	10,190 27	31,323 59	2,449	4,521,874
					1,887	7,383,846
mbia	14,658 06	17,916 03	23,500 00	56,074 09	1,635	1,728,517
s Barracks, Ohio	23,596 50	284 87	1,079 30	24,960 67	1,302	13,431
nd Arsenal, Ill					11	921,876
Arsenal, Ga						36,187
d Arsenal, Pa	241 45	230 00		471 45	1	1,282,246
y Arsenal, Pa	15 49			15 49	1	154,504
et Arsenal, N. Y						185,548
rsenal, Cal						168,067
sland, N. Y. H	67 00			67 00	42	
nt, N. Y					13	20,174
o Arsenal, Me						978
is Powder Depot, Mo						
oint, N. Y					7	
rn Arsenal, N. Y						
olis Arsenal, Ind						10,275
aham Lincoln, Dak					8	
Armory, Springfield,					5	426,550
nd total	328,779 15	357,090 02	280,622 13	967,031 80	30,200	152,691,868

WATER TRANSPORTATION.

[Fiscal year ending June 30, 1883.]

Depot or department.	Payments made for passenger transportation to June 30, 1883.	Payments made for freight transportation to June 30, 1883.	Expenditures, purchases, repairs, service.	Outstanding unpaid accounts, to June 30, 1883 (estimated).	Total expenditures for the service during the fiscal year.	Number of persons transported by the Quartermaster's Department during the fiscal year.	Pounds of freight transported by the Quartermaster's Department during the fiscal year.
Washington, D. C	$84 25	$1,800 31		$399 48	$2,284 04	36	138,126
New York City	6,279 68	16,543 45	$50,492 52	37,900 00	111,015 65	9,990	5,980,477
Philadelphia, Pa		115 93			115 93		64,115
Jeffersonville, Ind						5	68,439
Louisville, Ky	15 00	702 50			717 50		
Chicago, Ill		348 49			348 49		172,429
Saint Louis, Mo	104 00	1,280 42	3,301 63		4,686 05	5	169,343
San Francisco, Cal	95 50	3,476 67	15,478 63	2,184 93	21,235 73	405	2,029,944
The East	634 20	3,081 76	30,830 57	6,952 17	41,498 70	17,271	2,565,136
The South	5,661 00	7,658 31	8,851 78	3,799 70	25,970 79	239	971,493
California			17,127 17	10,000 00	27,127 17	396	292,074
The Platte			9,224 13		9,224 13		
Dakota			8,898 90	13,500 00	55,310 89	1,215	6,136,828
The Missouri	11,766 66	21,145 33	33 70	2,705 31	2,739 01	6	
Texas	126 00	5,500 95	72 00	300 00	5,998 95	247	667,631
Arizona	2,170 00	1,161 35		8,417 04	11,748 39	49	9,360
The Columbia	6,519 17	15,769 41	4,706 02	1,900 00	28,894 60	1,480	2,161,957
Columbus Barracks, Ohio						3	
Rock Island Arsenal, Ill							250,612
Augusta Arsenal, Ga							
Frankford Arsenal, Pa							
Allegheny Arsenal, Pa							
Watervliet Arsenal, N. Y							73 283
Benicia, Cal							141,699
David's Island, N. Y. H			304 12		304 12		
West Point, N. Y						39	24 897
Kennebec Arsenal, Me							
Saint Louis Powder Depot, Mo.							
Willets Point, N. Y.						1	
Watertown Arsenal, Mass							
Indianapolis Arsenal, Ind							
Fort Abraham Lincoln, Dak						2	
National Armory, Springfield, Mass							
Grand total	33,455 46	78,384 88	149,321 17	88,058 63	349,220 14	31,389	21,917,731

WAGON TRANSPORTATION.

[Fiscal year ending June 30, 1883.]

Depot or department.	Payments made for freight transportation to June 30, 1883.	Expenditures, purchases, repairs, services.	Outstanding unpaid accounts June 30, 1883 (estimated).	Total expenditure for the service during the fiscal year.	Pounds of freight transported by the Quartermaster's Department during the fiscal year.
Washington, D. C	$33 30	.....	$11 00	$44 30	173, 186
New York City	2, 997 45	$12, 296 43	$3, 610 78	18, 904 66	6, 754, 844
Philadelphia, Pa	2, 107 61	998 55	.....	3, 106 16	.....
Jeffersonville, Ind	41 19	6, 485 72	.....	6, 526 91	.....
Louisville, Ky	1, 467 24	23 50	.....	1, 490 74	.....
Chicago, Ill	.....	.....	.....	.....	10, 945, 998
Saint Louis, Mo	1, 093 69	53, 495 49	.....	54, 589 18	.....
San Francisco, Cal	27, 390 53	33, 564 34	4, 581 06	65, 535 93	.....
The East	3, 010 94	5, 393 63	177 65	8, 582 22	535, 029
The South	1, 969 59	318 85	133 15	2, 421 59	184, 263
California	.....	9, 532 77	33 00	9, 565 77	47, 709
The Platte	72, 875 18	58, 739 29	12, 040 00	143, 654 47	7, 736, 696
Dakota	86, 952 14	14, 197 36	21, 000 00	122, 149 50	9, 080, 978
The Missouri	143, 530 43	14, 347 35	19, 270 33	177, 148 11	13, 804 015
Texas	23, 876 39	2, 770 01	3, 127 69	29, 774 09	3, 649, 702
Arizona	78, 249 26	753 85	10, 192 25	89, 195 36	9, 615, 037
The Columbia	18, 857 73	22, 084 04	.....	40, 941 77	389, 071
Columbus Barracks, Ohio	.....	.....	.....	.....	.....
Rock Island Arsenal, Ill	.....	.....	.....	.....	.....
Augusta Arsenal, Ga	.....	.....	.....	.....	.....
Frankford Arsenal, Pa	275 99	.....	.....	275 99	.....
Allegheny Arsenal, Pa	.....	.....	.....	.....	.....
Watervliet Arsenal, N. Y	.....	.....	.....	.....	.....
Benicia Arsenal, Cal	.....	.....	.....	.....	.....
David's Island, N. Y. H	.....	.....	.....	.....	.....
West Point, N. Y	.....	.....	.....	.....	.....
Kennebec Arsenal, Me	11 00	.....	.....	11 00	17, 054
Saint Louis Powder Depot, Mo	.....	.....	.....	.....	.....
Willets Point, N. Y	.....	.....	.....	.....	.....
Watertown Arsenal, Mass	2 25	.....	.....	2 25	314, 964
Indianapolis Arsenal, Ind	.....	.....	.....	.....	.....
Fort Abraham Lincoln, Dak	.....	.....	.....	.....	.....
National Armory, Springfield, Mass	.....	.....	.....	.....	.....
Grand total	464, 741 91	235, 001 18	74. 176 91	773, 920 00	63, 248, 546

STAGE TRANSPORTATION.

[During fiscal year ending June 30, 1883.]

Depot or department.	Payments made for passenger transportation to June 30, 1883.	Payments made for freight transportation to June 30, 1883.	Outstanding unpaid accounts June 30, 1883. (Estimated.)	Total expenditures for the service during the fiscal year.	Number of persons transported by the Quartermaster's Department during the fiscal year.	Pounds of freight transported by the Quartermaster's Department during the fiscal year.
Washington, D. C	$48 50	.....	$21 50	$70 00	9	.....
ew York City	20 20	.....	.....	20 20	25	.....
Philadelphia, Pa	.....	.....	.....	.....	.....	.....
Jeffersonville, Ind	.....	.....	.....	.....	8	.....
Louisville, Ky	43 05	.....	.....	43 05	.....	.....
Chicago, Ill	5 50	.....	.....	5 50	3	.....
Saint Louis, Mo	1 00	.....	.....	1 00	1	.....
San Francisco, Cal	4,493 40	.....	208 00	4,701 40	132	.....
The East	137 20	$2 00	.....	139 20	33	.....
The South	5 48	.....	.....	5 48	5	.....
California	.....	.....	.....	.....	304	739
The Platte	6,890 48	17 31	1,700 00	8,607 79	480	2,255
Dakota	10,266 91	398 41	300 00	10,965 32	647	8,076
The Missouri	7,584 85	42 54	1,967 35	9,614 74	594	1,086
Texas	2,465 47	5 75	313 45	2,784 67	243	279
Arizona	11,060 95	292 36	219 10	11,572 41	628	165
The Columbia	9,644 24	148 05	550 00	10,342 29	450	479
Columbus Barracks, Ohio	.....	.....	.....	.....	10	.....
Rock Island Arsenal, Ill	.....	.....	.....	.....	.....	.....
Augusta Arsenal, Ga	.....	.....	.....	.....	.....	.....
Frankford Arsenal, Pa	7 00	.....	.....	7 00	.....	.....
Allegheny Arsenal, Pa	.....	.....	.....	.....	.....	.....
Watervliet Arsenal, N. Y	.....	.....	.....	.....	.....	.....
Benicia Arsenal, Cal	.....	.....	.....	.....	.....	.....
David's Island, N. Y. H	.....	.....	.....	.....	.....	.....
West Point, N. Y	.....	.....	.....	.....	.....	.....
Kennebec Arsenal, Me	.....	.....	.....	.....	.....	.....
Sant Louis Powder Depot, Mo	.....	.....	.....	.....	.....	.....
Willets Point, N. Y	.....	.....	.....	.....	.....	.....
Watertown Arsenal, Mass	.....	.....	.....	.....	.....	.....
Indianapolis, Ind	.....	.....	.....	.....	.....	.....
Fort Abraham Lincoln, Dak	.....	.....	.....	.....	5	.....
National Armory, Springfield, Mass	.....	.....	.....	.....	.....	.....
Grand total	52,674 23	906 42	5,299 40	58,880 05	3,577	13,079

MISCELLANEOUS EXPENDITURES.

On account of transportation during the year ending June 30, 1883, including pay of teamsters, transportation of agents, &c., purchase of animals, tolls, &c.]

Depot or department.	Payments made to June 30, 1883.	Outstanding unpaid accounts, June 30, 1883.	Total expenditures during the fiscal year.
Washington, D. C	$24,255 21	$620 85	$24,876 06
New York City	16,269 65	.....	16,269 65
Philadelphia, Pa	25,872 84	2,093 76	27,966 60
Jeffersonville, Ind	59,661 97	1,166 40	60,828 37
Louisville, Ky	1,293 45	.....	1,293 45
Chicago, Ill	75,689 62	537 34	76,226 96
Saint Louis, Mo	10,636 80	3,925 29	14,562 09
San Francisco, Cal	33,295 83	4,154 91	37,450 74
The East	34,541 17	7,930 48	42,471 65
The South	8,911 68	11,357 79	20,269 47
California	47,039 15	11,278 68	58,317 83
The Platte	238,853 22	973 54	239,826 76
Dakota	276,422 21	10,645 67	287,067 88
The Missouri	316,742 64	9,211 83	325,954 47
Texas	80,757 06	2,451 91	83,208 97
Arizona	113,391 95	13,180 29	126,572 24
The Columbia	66,942 63	1,335 78	68,278 41
Columbus Barracks, Ohio	1,771 80	436 25	2,208 05
Rock Island Arsenal, Ill	1,483 60	.....	1,483 60
Military Prison, Fort Leavenworth, Kans	15,447 71	.....	15,447 71
Frankford Arsenal, Pa	383 75	.....	383 75
Allegheny Arsenal, Pa	167 00	.....	167 00
Watervliet Arsenal, N. Y	.....	.....	.....
Benicia Arsenal, Cal	.....	.....	.....
David's Island, New York Harbor	4,572 44	.....	4,572 44
West Point, N. Y	811 32	6 45	817 77
Kennebec Arsenal, Me	.....	.....	.....
Saint Louis Powder Depot, Mo	.....	.....	.....
Willets Point, N. Y	.....	.....	.....
Watertown Arsenal, Mass	.....	.....	.....
Indianapolis, Ind	.....	.....	.....
Fort Abraham Lincoln, Dak	.....	.....	.....
National Armory, Springfield, Mass	.....	.....	.....
Grand total	1,455,214 70	81,307 22	1,536,521 92

RECAPITULATION.

Nature of transportation.	Passenger.		Freight.		Expenditures not strictly chargeable either to passenger or freight, paid up to June 30, 1883.	Outstanding unpaid accounts June 30, 1883 reported to this office.	Total of payments made and unpaid accounts reported to this office.
	No. transported.	Amount paid to June 30, 1883.	Pounds transported.	Amount paid to June 30, 1883.			
Rail	$30,200	$328 779 15	152,691,868	$357,630 02	.....	$280,622 13	$967,031 30
Water	31,389	33,455 46	21,917,731	78,384 88	$149,321 17	88,058 63	349,220 14
Wagon	.....	.....	63,248,546	464,741 91	235,001 18	74,176 91	773,920 00
Stage	3,577	52,674 23	13,079	906 42	.....	5,299 40	58,880 05
Miscellaneous	.....	.....	.....	.....	1,455,214 70	81,307 22	1,536,521 92
Grand total	65,166	414,908 84	237,871,224	901,663 23	1,839,537 05	529,464 29	3,685,573 41

I.—*Copy of letter of the Solicitor of the Treasury in relation to suit brought against certain indebted railroad companies, and reply of Secretary of War.*

DEPARTMENT OF JUSTICE,
OFFICE OF THE SOLICITOR OF THE TREASURY,
Washington, D. C., November 28, 1882.

SIR: I have the honor to acknowledge the receipt of your letter of the 14th instant, in relation to the suit of United States *vs.* The McMinnville and Manchester Railroad Company, brought January 8, 1872, in the United States circuit court for the middle district of Tennessee, to recover $46,508.54, due on rolling stock bought by said company from the War Department in February and June, 1866.

In reply, I would say that the original receipts of the company are not now required. I am informed by the United States attorney that the case was tried on the 8th instant, and a decree rendered in favor of the Government for the amount claimed, with interest, less such sums as may be found due by the United States for the transportation of mails, troops, and military supplies

The matter has been referred to the clerk of the court as special commissioner to take proof and state an account. The United States attorney says:

"The defendants will have to make this proof, of course, as to transportation; but I desire to know what the facts are from the proper accounting officers before the account is stated by the clerk of the court."

I have accordingly to request information on the following points:

What amount is due the McMinnville and Manchester Railroad Company for transportation of United States troops and military supplies over that road prior to August 15, 1871.

What amount is due to the Memphis and Charleston Railroad Company for transportation of United States troops and military supplies over the McMinnville and Manchester Railroad during the time the latter road remained in the possession of the Memphis and Charleston Railroad Company, which was from August 15, 1871, till January 3, 1877.

Very respectfully,

K. RAYNER,
Solicitor of the Treasury.

Hon. ROBERT T. LINCOLN,
Secretary of War.

WAR DEPARTMENT,
Washington City, D. C., December 12, 1882.

SIR: In connection with previous correspondence upon the subject, I have the honor to acknowledge the receipt of your letter of the 28th ultimo, stating that you have received information from the United States district attorney that the suit of The United States *vs.* The McMinnville and Manchester Railroad Company, brought January 8, 1872, in the United States circuit court for the Middle District of Tennessee, to recover $46,508.54 due on rolling-stock bought by said company from the War Department in February and June, 1866, was tried on the 8th ultimo, and a decree rendered in favor of the Government for the amount claimed, with interest, less such sums as may be found due by the United States for the transportation of mails, troops, and military supplies.

You accordingly inquire, for the information of the United States attorney, as to the amount due to the McMinnville and Manchester Railroad Company for transportation of United States troops and military supplies over that road, prior to August 15, 1871, and the amount due to the Memphis and Charleston Railroad Company for transportation of United States troops and military supplies over the McMinnville and Manchester Railroad, during the time the latter road remained in the possession of the Memphis and Charleston Railroad Company, which was from August 15, 1871, until January 3, 1877.

In reply, I beg to state that the Quartermaster-General, to whom your inquiry was referred, reports, under date of the 7th instant, as follows:

"So far as shown by the records and files of this office, there is *no amount whatever* due for military transportation over the McMinnville and Manchester Railway *at any time.*

"It is possible that the railroad company may have in its possession bills of lading, transportation requests or certificates, upon which accounts might be based, but which have not been presented to the United States for settlement."

With said report the Quartermaster-General submitted a statement of the account between the railroad company and the United States for railway material purchased,

which statement is herewith inclosed, showing credits to the company of amounts of accounts for military transportation, as follows: Prior to August 15, 1871, $7.25; between August 15, 1871, and January 3, 1877, $20.98.

Very respectfully, your obedient servant,

ROBT. T. LINCOLN,
Secretary of War.

The SOLICITOR OF THE TREASURY.

5.—*Report covering principal operations of barracks and quarters branch for fiscal year* 1882 *and* 1883.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 11, 1883.

GENERAL: I have the honor to submit report covering the principal operations of the barracks and quarters branch of this office for the fiscal year ending June 30, 1883.

NEW CONSTRUCTIONS.

During the year the construction of ninety (90) new buildings, such as barracks, officers' quarters, stables, storehouses, guard-houses, coal sheds, magazines, &c., has, subject to funds proving sufficient, been authorized at an estimated cost of $147,178.

These are at the military posts in the States of Kansas, Colorado, Nebraska, Texas, New York, Virginia, Michigan, Florida, California, and in the Territories of New Mexico, Wyoming, Utah, Montana, Dakota, Idaho, Arizona, and Washington.

REPAIRS.

Subject to same condition as noted above and upon special estimates, authority has been given to make repairs, alterations, &c., of public buildings, for the construction and repair of cisterns, for the purchase of tools, &c., for use at the various military posts, to the amount of $452,559.

Recapitulation of the expenditures authorized for new buildings, repairs, &c., and how distributed.

Department.	Cost of new projects.	Cost of repairs, &c.	Total.
Department of California	$4,473 00	$32,443 00	
Department of the Columbia	31,990 00	29,344 00	
Department of Arizona	30,846 00	22,364 00	
Total Division of the Pacific	67,309 00	84,151 00	$151,460 00
Department of the Missouri	9,574 00	136,265 00	
Department of the Platte	23,822 00	38,037 00	
Department of Dakota	22,896 00	57,407 00	
Department of Texas	7,593 00	25,608 00	
Total Division of the Missouri	63,885 00	257,317 00	321,202 00
Department of the East	4,967 00	97,293 00	
Department of the South	11,017 00	13,798 00	
Total Division of the Atlantic	15,984 00	111,091 00	127,075 00
Grand total			599,737 00

SCHOOL-HOUSES, ETC.

Out of the money above indicated the Secretary of War, under section 1231, Revised Statutes, authorized, during the year, buildings to be erected or fitted up for school and religious purposes, at the following posts and cost:

Fort Trumbull, Conn	$1,136 00
Fort Walla Walla, Wash	208 00
Fort Wingate, N. Mex	1,500 00
Fort Stanton, N. Mex	1,500 00
Total	4,344 00

WHARVES.

Authority has been given for the expenditure of $18,382 for wharf improvements at the following posts:

Jackson Barracks, La	$4,064 00
Angel Island, Cal	1,927 00
Fort Stevens, Oreg	2,164 00
Willets Point, N. Y	1,120 00
Fort Barrancas, Fla	1,296 00
Alcatraz Island, Cal	7,811 00
Total	18,382 00

WATER AND SEWERAGE.

For improving the water supply and sewerage at the following posts an expenditure of $51,852 has been authorized from appropriation for supplying military posts with water:

Mount Vernon Barracks, Ala	$1,655 00
Saint Augustine, Fla	5,396 00
Camp Huachuca, Ariz	4,995 00
Jefferson Barracks, Mo	6,103 00
Angel Island, Cal	2,778 00
Fort Trumbull, Conn	343 00
Fort Boisé, Idaho	674 00
Fort Stevens, Oreg	1,184 00
Fort Riley, Kans	1,130 00
Fort Laramie, Wyo	540 00
Fort Missoula, Mont	4,000 00
Fort Sully, Dak	2,000 00
Fort McIntosh, Tex	1,200 00
Fort Adams, R. I	2,390 00
Fort Davis, Tex	5,000 00
Fort Bidwell, Cal	1,019 00
Presidio, Cal	2,752 00
Fort Spokane, Wash	1,473 00
Fort Walla Walla, Wash	3,260 00
Fort McDowell, Ariz	842 00
Jackson Barracks, La	3,118 00
Total	51,852 00

SPECIAL PROJECTS AUTHORIZED BY CONGRESS.

The sundry civil bill of August 7, 1882, granted—

For new buildings for officers' quarters at Fort Apache	$13,928 44
For replacing the barracks at Fort Leavenworth, Kans., burned on February 1, 1882	18,745 77
For completing the new barracks at Fort Leavenworth, Kans	47,000 00
For erection of additional officers' quarters at Fort Leavenworth, Kans.	41,211 00
For completing the post of Fort Maginnis, Mont	25,000 00
For erection of a quartermaster and commissary depot building at Saint Paul, Minn	48,500 00

Sundry civil bill of March 3, 1883, granted—

For the enlargement and construction of such military posts as in the judgment of the Secretary of War may be necessary	$200,000 00
Total	394,385 21

The Secretary of War distributed the $200,000 as follows, *i. e.:*

Fort Colville, Wash	$50,000 00
Fort Bliss, Tex	10,000 00
Fort Douglas, Utah	19,000 00
Fort Omaha, Nebr	10,999 10
Fort Bridger, Wyo	33,500 00
Fort Thornburgh, Utah	1,500 90
Fort Huachuca, Ariz	
Fort Grant, Ariz	75,000 00
Fort Apache, Ariz	
Total	200,000 00

HOSPITALS.

During the fiscal year construction, repairs, alterations, &c., of military hospital buildings have been authorized to the amount of $74,968.

The following table gives the locality of the hospitals and the amount of expenditures authorized at each:

Department.	Post.	Amount.	Total.
Platte	Fort Hall, Idaho	$43 00	
	Fort Bridger, Wyo	235 00	
	Fort Douglas, Utah	191 00	
	Fort Fred Steele, Wyo	3,000 00	
	Fort Laramie, Wyo	83 00	
	Fort Omaha, Nebr	54 00	
	Fort D. A. Russell, Wyo	335 00	
	Fort Sidney, Nebr	220 00	
	Fort Robinson, Nebr	986 00	
	Fort Niobrara, Nebr	957 00	
	Total Department of the Platte		$6,104
Missouri	Jefferson Barracks, Mo	1,797 00	
	Fort Leavenworth, Kans	468 00	
	Uncompahgre, Colo	298 00	
	Fort Craig, N. Mex	1,254 00	
	White River, Colo	633 00	
	Fort Garland, Colo	211 00	
	Fort Cummings, N. Mex	303 00	
	Fort Hays, Kans	80 00	
	Fort Lewis, Colo	3,921 00	
	Fort Riley, Kans	373 00	
	Fort Wingate, N. Mex	360 00	
	Fort Stanton, N. Mex	100 00	
	Fort Supply, Idaho	280 00	
	Fort Union, N. Mex	124 00	
	Fort Cameron, Utah	93 00	
	Fort Gibson, Idaho	343 00	
	Fort Sill, Idaho	1,274 00	
	Fort Reno, Idaho	1,125 00	
	Fort Elliott, Tex	273 00	
	Fort Bliss, Tex	20 00	
	Total Department of the Missouri		13,330 00
Dakota	Poplar Creek, Mont	2,652 00	
	Fort Snelling, Minn	5,604 00	
	Fort Yates, Dak	92 00	
	Fort Maginnis, Mont	1,069 00	
	Fort Missoula, Mont	598 00	
	Fort Buford, Dak	419 00	
	Fort Bennett, Dak	34 00	
	Fort Meade, Dak	217 00	
	Fort Randall, Dak	150 00	
	Fort McKinney, Mont	539 00	
	Fort Keogh, Mont	101 00	
	Fort Custer, Mont	1,327 00	
	Fort Shaw, Mont	381 00	
	Fort Stevenson, Dak	466 00	
	Fort Sully, Dak	250 00	

Department.	Post.	Amount.	Total.
Dakota	Fort Totten, Dak	$228 00	
	Fort Sisseton, Dak	90 00	
	Fort Abraham Lincoln, Dak	8,178 00	
	Fort Hale, Dak	15 00	
	Total Department of Dakota		$17,406 00
Texas	Fort Ringgold, Tex	60 00	
	Fort Brown, Tex	298 00	
	Fort Clark, Tex	237 00	
	Total Department of Texas		595 00
	Total Division of the Missouri		87,437 00
California	Angel Island, Cal	201 00	
	Benicia Barracks, Cal	508 00	
	Fort Gaston, Cal	79 00	
	Fort Halleck, Nev	155 00	
	Presidio, Cal	273 00	
	Total Department of California		1,211 00
Arizona	Fort Apache, Aris	2,928 00	
	Fort Grant, Aris	4,000 00	
	Fort Thomas, Aris	1,006 00	
	Fort Mojave, Aris	86 00	
	Whipple Barracks, Aris	84 00	
	Fort Bowie, Aris	155 00	
	Fort Yuma, Cal	228 00	
	Total Department of Arizona		8,487 00
Columbia	Fort Boise, Idaho	283 00	
	Fort Canby, Wash	696 00	
	Fort Klamath, Oreg	192 00	
	Fort Spokane, Wash	2,000 00	
	Fort Lapwai, Idaho	20 00	
	Fort Stevens, Oreg	181 00	
	Vancouver Barracks, Wash	5,000 00	
	Fort Walla Walla, Wash	186 00	
	Total Department of the Columbia		8,569 00
	Total Division of the Pacific		18,258 00
South	Newport Barracks, Ky	27 00	
	Mount Vernon Barracks, Ala	2,200 00	
	Jackson Barracks, La	1,200 00	
	Fort Barrancas, Fla	1,282 00	
	Little Rock Barracks, Ark	337 00	
	Saint Augustine, Fla	851 60	
	Total Department of the South		5,897 00
East	David's Island, New York Harbor	1,072 00	
	Fort Hamilton, New York Harbor	819 00	
	Fort Mackinac, Mich	898 00	
	Fort Wayne, Mich	518 00	
	Fort McHenry, Md	528 00	
	Fort Warren, Mass	251 00	
	Willets Point, N. Y	331 00	
	Fort Monroe, Va	178 00	
	Washington Barracks, D. C	1,685 00	
	Fort Wadsworth, New York Harbor	171 00	
	Fort Adams, R. I	109 00	
	Plattsburg Barracks, N. Y	10 00	
	Fort Porter, N. Y	150 00	
	Fort Preble, Me	374 00	
	Fort Schuyler, New York Harbor	5,000 00	
	Fort Trumbull, Conn	65 00	
	Fort Myer, Va	24 00	
	Columbus Barracks, Ohio	265 00	
	Madison Barracks, N. Y	339 00	
	West Point, N. Y	339 00	
	Fort Niagara, N. Y	250 00	
	Total Department of the East		18,376 00
	Total Division of the Atlantic		19,273 00
	Grand total		74,968 00

For the construction and repair of hospitals for 1882 and 1883 Congress granted $75,000, and also provided as follows:

That one hundred thousand dollars be, and hereby is, appropriated for the erection of an Army and Navy hospital at Hot Springs, Arkansas, which shall be erected by and under the direction of the Secretary of War, in accordance with plans and specifications to be prepared and submitted to the Secretary of War by the Surgeon-General of the Army and Navy; which hospital, when in a condition to receive patients, shall be subject to such rules, regulations, and restrictions as shall be provided by the President of the United States: *Provided further*, That such hospital shall be erected on the Government reservation at or near Hot Springs, Arkansas. (G. O. 72, of 1882, A. G. O.)

After preparation of the plans the work was, under authority of the Secretary of War, duly advertised. Bids ranged from $86,335 to $137,700, contract being awarded at the former figure.

SALE OF BUILDINGS.

The sale of 106 buildings, located in Maine, Florida, Louisiana, Tennessee, Texas, Wyoming, Utah, and Colorado, has been authorized.

V.—AN ACT to authorize the Secretary of War to sell the military barracks, and the lands upon which they are located, in the city of Savannah, Georgia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of War be, and he is hereby, authorized to sell the military barracks located in the city of Savannah, Georgia, in such manner as he may think best for the public interest; and he is hereby authorized to make deed conveying the same, with the lands on which said barracks are located, now the property of the United States, to the purchaser or purchasers; and that he pay the money received for said property into the Treasury of the United States: *Provided*, That the said property shall be appraised by a board of three Army officers, and shall be sold at public sale at not less than its appraised value.

Approved, April 7, 1882. (G. O. 46, of 1882, A. G. O.)

Under the above act the Secretary has ordered the property to be fully advertised, the sale to take place November 15, 1883.

The property has been appraised at $67,381.88.

BUILDINGS TRANSFERRED.

Buildings at Old Fort Thornburgh transferred to the Interior Department.

Marine hospital buildings at Saint Mark's, Fla., transferred to the Treasury Department.

Buildings at Camp Russell, near Raleigh, N. C., transferred to the State authorities.

MILITARY SITES IN TEXAS.

Congress in sundry civil bill of March 3, 1875, granted for purchase of site of—

Fort Brown, Texas	$25,000
Fort Duncan, Texas	10,000

The owners of the former site having declined to sell for that amount, and the War Department having held since 1880 that Fort Brown was of little importance, and that no greater price would be paid therefor, nothing further has been accomplished up to the present time so far as known to this office.

Regarding Fort Duncan, the owner from the first declined to sell for $10,000, since which time his price has steadily increased, until it recently reached some $36,000.

This price being considered by the Lieutenant-General, the General of the Army, and the Secretary of War as exorbitant, the Secretary has ordered the abandonment of the post, transfer of troops to other posts, and sale of such property thereat as would not pay for removing, as recommended by the Quartermaster-General.

ess, as will be seen by G. O. No. 27, of 1880, A. G. O., granted
) for acquiring sites, &c., in Texas:

aking appropriations for acquiring sites and the erection of suitable posts for the protection of the Rio Grande frontier.

icted by the Senate and House of Representatives of the United States of America in ssembled, That the sum of two hundred thousand dollars be, and the same is ›propriated, out of any money in the Treasury not otherwise appropriated, rpose of acquiring sites and erecting thereon such military posts on or near ·ande frontier as may be deemed necessary by the Secretary of War for the protection thereof: *Provided*, That none of said appropriation shall be he purposes aforesaid until a valid title to said sites be vested in the United *nd prorided further*, That the State of Texas shall duly release and relin- he United States the right to assess or tax said sites, or any of them, or any ents placed thereon for military purposes, as long as the United States shall e owner thereof.
ed April 16, 1880. (G. O. 27, 1880, A. G. O.)

u Army bill of June 30, 1882, the above act was modified so as

› act entitled "An act making appropriations for acquiring sites and the f suitable posts for the protection of the Rio Grande frontier," approved eenth, eighteen hundred and eighty, be amended by striking out the words ›ar the Rio Grande frontier as may be deemed necessary by the Secretary of he adequate protection thereof: *Provided*, That none of said appropriation sed for the purposes aforesaid until a valid title to said sites be vested in d States," and inserting in lieu thereof the words "in the State of Texas as ›emed necessary by the Secretary of War for the adequate protection of the le frontier; but no part of this appropriation shall be expended until the › of section three hundred and fifty-five of the Revised Statutes have been plied with." (G. O. 72 of 1882, A. G. O.)

f this the Secretary has thus far authorized—

ıase of Fort Davis site	$23,500 00
ıase of grounds at San Antonio	41,742 20
ıase of site of Camp Rice, Texas	2,370 00

ecords show that the Department of Justice has rendered favor- nion on the United States title to the San Antonio land, and for :he site of Camp Rice, while no title papers covering site of Fort ave as yet reached this office.

POST CEMETERIES.

ıditures to the amount of $8,080 have been authorized for the g cemeterial work during the fiscal year:

Post	Character of work, &c.	Cost.
;e Barracks, La	Remains removed to Baton Rouge National Cemetery.	$200 00
Barracks, Fla	Repairing headboards, &c	201 00
nry, Md	Headstones	458 00
ra, N. Y	Fence improvements	230 00
, Cal	Repairing headboards, &c	432 00
›ull, Conn	Fence improvements	80 00
Walla, Wash	....do	155 00
ırman and Sanders, Wyo	Removing remains to Fort McPherson National Cemetery.	600 00
ardson, Stockton, McKavett, and 'ex.	Removing remains to San Antonio National Cemetery.	1,500 00
, N. Y	Removing remains to Forest Lawn Cemetery	320 00
, Recovery, and Bainbridge, Ga	Marking by gun-monuments sites of graves	1,200 00
La	Removing bodies to Vicksburg National Cemetery.	40 00
daho	Removing bodies to Fort McPherson National Cemetery.	200 00
ıx	Removing bodies to nearest post cemetery	400 00
Barracks, Wash	Removing bodies to another site, &c	1,400 00
ıuca, Ariz	....do	664 00
		8,080 00

LOSSES BY FIRE.

Post.	Property destroyed or injured.
Vancouver Barracks, Wash.....	One set officers' quarters.
Fort Maginnis, Mont	Bakery and post trader's building.
Fort A. Lincoln, Dak.....	Shop and engine building and non-commissioned staff quarters (old).
Washington Depot, D. C.....	Shed and certain quartermaster property.

RESERVATION DECLARED.

Designation.	Date.
Fort Supply, Ind. T.....	*January 17, 1883.

* Boundaries enlarged.

TRANSFERRED.

Designation.	Date.	Disposition.
Fort Benton, Mont.....	January 5, 1883	To Interior Department.
Fort Brooke, Fla.....	January 4, 1883	do
Fort Larned, Kans.....	March 26, 1883	do
Fort Hall, Idaho.....	June 11, 1883	do

Projects for new constructions and repairs for fiscal year 1884–'85 were submitted to the Hon. Secretary of War, on August 25, 1883, in compliance with the circular of July 24, 1883.

Respectfully submitted.

ALEX. J. PERRY,
Asst. Quartermaster-General, U. S. A.

6.—*Report of Maj. B. C. Card, quartermaster United States Army, of the operations of the claims branch of the Quartermaster-General's Office for the fiscal year ending June* 30, 1883.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., July 22, 1883.

GENERAL: I have the honor to submit the following report of the business of this office during the fiscal year ending June 30, 1883, so far as relates to the investigation and adjudication of claims for quartermaster stores taken or furnished for the use of the Army during the War of the Rebellion, in States not in insurrection, as provided for in section 300 A, Revised Statutes ot the United States.

The third section of the act of March 3, 1879, provides that all claims for such stores not presented and filed prior to the 1st of January, 1880, shall be forever barred. Consequently no new claims are now being received.

During the war many claims were presented to certain military boards

and commissions appointed by department and district commanders, and received a greater or less investigation, but no final and complete action. The Quartermaster-General, in 1880, held that the presentation of a claim before such boards and commissions was such a presentation and filing of a claim as to save it from being barred under the third section of the act of March 3, 1879, and during the fiscal year last past seventy-one of this class of claims have been called up in this office by the parties interested, and have been considered under the act of July 4, 1864, section 300 A, Revised Statutes of the United States.

Until the legislation upon the subject of the investigation of these claims at the first session of the Forty-seventh Congress, the expense attending upon the investigation of these claims was paid from the appropriation for the support of the Army, as the work was assigned to agents employed under the immediate direction of certain officers of the Quartermaster's Department, to whom were given certain geographical districts. The chief quartermaster Military Division of the Missouri at first, and subsequently the depot quartermaster at Saint Louis, Mo., had charge of the district embracing the States of Missouri, Kansas, and Illinois, and the Indian Territory; the depot quartermaster at Jeffersonville, Ind., of the district embracing the States of Kentucky, Indiana, and Ohio; the quartermaster at Nashville, Tenn. (until relieved from duty at that place), of the district of Tennessee. When the quartermaster at Nashville was relieved the State of Tennessee was transferred to the district under the depot quartermaster at Jeffersonville. The depot quartermaster at Washington, D. C., was in charge of the claims in the district embracing the States of Pennsylvania, Maryland, West Virginia, and the District of Columbia. The act of June 30, 1882, making appropriation for the support of the Army for the fiscal year ending on the 30th June, 1883, and for other purposes, provides that no part of the sum appropriated by said act shall be used or expended in the investigation of the claims hereinbefore referred to. But provision was made by the act approved August 5, 1882, making appropriation for the legislative, executive, and judicial expenses of the Government for certain clerks, agents, and others to be employed by the Quartermaster-General in connection with the investigation of said claims. In accordance with that provision the claim districts were abolished and the work centralized in the office of the Quartermaster-General.

Under the act of August 5, 1882, above referred to, provision was made for the following-described clerks and others to be employed by the Quartermaster-General in the investigation of claims under the act of July 4, 1864, viz: 1 clerk of class 4; 2 clerks of class 3; 4 clerks of class 2; 11 clerks of class 1; 2 clerks at $1,000 each; 11 copyists; 3 assistant messengers; 1 watchman, and 25 agents at $1,400 each and a per diem allowance while traveling on duty, not exceeding $3 per day each, and also for actual necessary expenses of transportation.

Under the joint resolutions of Congress approved June 30, July 12, and August 1 and 5, 1882, provision was made for the payment, from the appropriation for the support of the Army, of expenses incident to the investigation of the aforesaid claims, from July 1 to August 5, 1882, the latter being the date of the passage of the act which provided for their payment from the appropriation for the legislative, executive, and judicial expenses of the Government.

The following statememt shows the number of investigating agents employed from July 1, 1882, to August 5, 1882, in the several districts, the amount paid for the services of said agents, and the amount paid

for reimbursement of expenses incurred by them for transportation and for their per diem allowances while traveling:

Stations of officers under whom agents were employed.	No. of agents.	Amount paid for services of agents.	Amount reimbursed for expenses, &c.	Totals.
Depot quartermaster, Jeffersonville, Ind	25	$3,192 67	$3,097 80	$6,290 47
Depot quartermaster, Saint Louis, Mo	7	874 92	1,099 72	1,974 64
Depot quartermaster, Washington, D. C	8	1,017 15	964 53	1,981 68
Total		5,084 74	5,162 05	10,246 79

The cost of transportation furnished in kind to said agents amounted to $436.65. In addition to the agents employed in the investigation of claims, the services of clerks and copyists were required to arrange and brief the proof filed by claimants, the testimony collected, and the reports made by officers and agents making the investigation. The cost of such service from July 1 to August 5, 1882, amounted to $3,582.63, thus showing the total amount paid from the appropriation for the support of the Army, in connection with the investigation and examination of claims from July 1 to August 5, 1882, to be $14,266.07.

The following table shows the names of the agents employed, the total amount paid for salary, for per diem, and for traveling expenses to each; the number of claims investigated, and the average cost of the investigation of claims, by each agent for the past fiscal year:

Table relating to the investigation of claims.

Names of agents.	Period of service.		Amounts paid to each.				Number of claims investigated.	Cost per claim for investigation.	Remarks.
	From—	To—	Salary.	Per diem, &c., while traveling.	Expense of transportation.	Total.			
Sangston, James A	July 1, 1882	Aug. 5, 1882	$136 10	$146 55	$12 40	$295 05			Discharged.
Stibbs, J. H	July 1, 1882	Aug. 5, 1882	145 83	177 60		323 43			Do.
Fletcher John	July 1, 1882	Aug. 5, 1882	116 67	121 00	12 60	250 27			Do.
Boyd, Robert	July 1, 1882	Aug. 5, 1882	116 67	128 00	25 95	270 62			Do.
Beals, J. F	July 1, 1882	Aug. 5, 1882	116 67	115 15		231 82			Do.
Funk, Augustus	July 1, 1882	Aug. 5, 1882	136 10	227 45		374 96	2	$187 48	Do.
	Aug. 6, 1882	Aug. 8, 1882	11 41						
Reeve, N	July 1, 1882	July 20, 1882	77 76	85 02		162 78	1	162 78	Do.
NcNerhany, F	July 1, 1882	July 31, 1882	116 66	162 25	17 65	296 56	2	148 28	Do.
Hoffman, George E	July 1, 1882	Aug. 5, 1882	136 10	145 15		2,168 59	25	86 74	
	Aug. 8, 1882	June 30, 1883	1,255 44	336 00	295 90				
Ingalls, Rufus, 2d	July 1, 1882	Aug. 5, 1882	136 10	229 30	140 00	2,784 55	39	71 40	
	Aug. 6, 1882	June 30, 1883	1,263 05	744 00	272 10				
Latshaw, Henry C	July 1, 1882	Aug. 5, 1882	136 10	168 80		2,491 75	41	60 77	
	Aug. 8, 1882	June 30, 1883	1,255 44	444 00	487 41				
Schreiner, H	July 1, 1882	Aug. 5, 1882	136 10	81 75		217 85	4	54 46	Discharged.
Sallade, Madison	July 1, 1882	Aug. 5, 1882	62 50	62 00		2,382 04	44	54 14	
	Aug. 11, 1882	June 30, 1883	1,251 64	882 00	123 90				
Rogers, C. P	July 1, 1882	Aug. 5, 1882	136 10	161 99		298 09	7	42 58	Discharged.
Nightingale, J. W	July 1, 1882	Aug. 5, 1882	160 10	135 30		297 61	7	42 52	Discharged.
	Aug. 6, 1882	Aug. 8, 1882	11 41	9 00	5 80				
Kinsman, O. D	July 1, 1882	Aug. 5, 1882	116 67	147 20	23 95	287 82	7	41 12	Do.
Nye, Z. F	July 1, 1882	Aug. 5, 1882	145 83	129 46		322 00	8	40 25	Do.
	Aug. 6, 1882	Aug. 11, 1882	22 83	18 00	5 88				
Dobbyn, Jno. F	July 1, 1882	Aug. 5, 1882	136 10	176 51		2,674 10	69	38 76	
	Aug. 6, 1882	June 30, 1883	1,263 05	924 00	174 44				
Leak, Joseph F	July 1, 1882	Aug. 5, 1882	116 67	130 20		399 74	16	37 48	Died Oct. 31, 1882.
	Aug. 20, 1882	Oct. 30, 1882	273 92	58 00	20 95				
Hedrick, Thos. H	July 1, 1882	July 31, 1882	116 67	133 65	34 05	284 37	9	31 60	Discharged.
Speel, Alex. R	July 1, 1882	Aug. 5, 1882	128 32	147 60		2,540 14	92	27 61	
	Aug. 7, 1882	June 30, 1883	1,259 00	759 00	245 97				
Chapman, Jno. A	July 1, 1882	Aug. 5, 1882	145 83	118 75	32 70	1,236 69	45	27 48	Resigned Feb. 28, 1882.
	Aug. 13, 1882	Feb. 28, 1883	762 06	114 00	63 35				
Reeve, Arthur T	July 1, 1882	Aug. 5, 1882	42 78			1,542 34	60	25 71	
	Sept. 5, 1882	May 21, 1883	991 26	417 00	91 30				
Ickis, A. F	July 1, 1882	Aug. 5, 1882	145 83	139 15		1,097 88	44	24 95	Resigned.
	Aug. 6, 1882	Dec. 31, 1882	563 05	165 00	84 85				
Newell, Chas	Jany. 4, 1883	June 30, 1883	684 44	429 00	72 26	1,185 70	48	24 70	
Woodburn, M. A	July 1, 1882	Aug. 5, 1882	145 83	131 10		2,345 68	96	24 43	
	Aug. 6, 1882	June 30, 1883	1,263 05	630 00	175 70				

Table relating to the investigation of claims—Continued.

Names of agents.	Period of service.		Amount paid to each.				Number of claims investigated.	Cost per claim for investigation.	Remarks.
	From—	To—	Salary.	Per diem, &c., while traveling.	Expense of transportation.	Total.			
Rankin, W. G	July 1, 1882	Aug. 5, 1882	$136 10	$136 67	.....	$1,370 84	57	$24 05	Resigned.
	Aug. 8, 1882	Dec. 31, 1882	555 45	438 00	$104 62				
Lynch, Alex	July 1, 1882	Aug. 5, 1882	136 10	126 10	22 95	2,470 74	103	23 99	
	Aug. 8, 1882	June 30, 1883	1,255 44	774 00	156 15				
Sawyer, Fred. A	July 1, 1882	Aug. 5, 1882	136 10	132 75	.....	2,540 85	107	23 75	
	Aug. 6, 1882	June 30, 1883	1,263 05	744 00	264 95				
Thatcher, Thomas M	July 1, 1882	Aug. 5, 1882	136 10	129 40	15 00	2,206 55	93	23 73	
	Aug. 6, 1882	June 30, 1883	1,263 05	570 00	93 00				
Saunders, Thomas J	July 1, 1882	Aug. 5, 1882	136 10	128 00	.....	2,263 05	97	23 33	
	Aug. 6, 1882	June 30, 1883	1,263 05	564 00	171 90				
Melindy, Peter	July 1, 1882	Aug. 5, 1882	58 33	16 75	19 00	1,764 80	79	22 34	
	Aug. 13, 1882	June 30, 1883	1,171 07	426 00	73 65				
Taylor, C. W	Dec. 1, 1882	June 30, 1883	817 93	600 00	112 47	1,530 40	72	21 26	
Fits Henry, E	July 1, 1882	Aug. 5, 1882	145 83	146 05	.....	2,331 65	120	19 43	
	Aug. 6, 1882	June 30, 1883	1,263 05	642 00	134 72				
Livsey, Joseph	July 1, 1882	Aug. 5, 1882	136 10	136 40	4 55	2,521 85	131	19 25	
	Aug. 6, 1882	June 30, 1883	1,263 05	882 00	99 75				
Cooper, John S	July 1, 1882	Aug. 5, 1882	136 10	135 35	21 40	2,277 52	119	19 14	
	Aug. 23, 1882	June 30, 1883	1,194 57	621 00	169 10				
Quimby, H. B	July 1, 1882	Aug. 5, 1882	136 10	.....	15 00	2,274 98	123	18 50	
	Aug. 6, 1882	June 30, 1883	1,263 05	762 00	98 83				
Dougherty, John C	July 1, 1882	Aug. 5, 1882	145 83	146 45	18 60	2,321 73	146	15 90	
	Aug. 17, 1882	June 30, 1883	1,217 40	627 00	166 45				
Fry, John	July 1, 1882	Aug. 5, 1882	136 10	122 90	3 90	262 90	17	15 46	Discharged.
Bostwick, Charles B	Mar. 4, 1883	June 30, 1883	455 00	291 00	136 85	882 85	58	15 22	
Britton, Wiley	Jan. 26, 1883	June 30, 1883	598 88	456 00	337 62	1,392 50	100	13 92	
Ekin, William M	July 1, 1882	Aug. 5, 1882	136 10	140 85	31 95	2,435 95	175	13 92	
	Aug. 6, 1882	June 30, 1883	1,263 05	633 00	231 00				
Putman, James	July 1, 1882	Aug. 5, 1882	145 83	130 45	.....	1,738 92	141	12 33	
	Aug. 9, 1882	June 30, 1883	1,247 84	168 00	46 80				
Dutton, Ira B	July 1, 1882	Aug. 5, 1882	145 83	118 00	.....	1,593 38	182	8 75	
	Aug. 6, 1882	June 30, 1883	1,263 05	66 00	50				
Total	.....	.....	35,834 02	20,340 05	4,969 82	61,143 89	2,586	.....	
Average cost per claim by all the agents	.....	.....	.....	.....	.....	.....	.....	23 64	

While the foregoing table shows the number of claims investigated and reported to this office by each agent, and the cost attending the same in each, still it does not fairly show the extent of service rendered by each agent, because (1) while some claims are of such a character that but a few hours would be required in their investigation and in making up the reports, and require but little travel, and the examination of but few witnesses, others demanded several days of investigation—the examination of many witnesses, and involved much travel and a large record; and (2) in States like Missouri and West Virginia, where the remaining claims are few in number, and the residence of claimants remote from each other, a much longer time and greater cost is unavoidable in the investigation than in a State like Tennessee, where the claims are still numerous and the claimants near to each other.

Still, the average cost was greater than it should be in any other year. To some extent, this was due to the uncertainty, at the commencement of the fiscal year, as to whether these agencies were to be continued, or, if continued, which of the agents were to remain in service, in view of the reduction in the number proposed and afterwards enforced, and to the transfer or reassignment of agents, in consequence of such reduction. About one month was lost pending the legislation on the subject.

The total number and amounts of claims investigated and reported upon by agents, and the amounts recommended by them for allowance, are as follows:

Between what dates.	No of claims.	Amount of claims.	Recommended by agents.
July 5, 1882, to August 5, 1882	197	$128,059 62	$20,500 81
August 6, 1882, to June 30, 1883	2,389	1,642,058 95	251,332 44
Total	2,586	1,770,118 57	271,833 25

The following statement shows the number and amount of claims on hand July 1, 1882; number of claims presented to military boards and commissions prior to January 1, 1880, and called up in the Quartermaster-General's Office during the last fiscal year; number of claims adjudicated by the Quartermaster-General; the amounts approved in full or in part; the amounts disallowed, and the number and amount of those remaining on hand July 1, 1883.

	Number.	Amount.
On hand July 1, 1882	16,896	$7,771,174 58
Military boards and commissions claims called up	71	44,388 91
Total on hand and received during the year	16,967	7,815,563 49

Upon the above action was taken as follows:

	Number.	Amount.
Approved in whole or in part	1,879	
Upon those claims (1879) there was allowed $312,151.70, and disallowed $573,383.13		$885,534 83
Rejected	3,114	2,606,673 38
Total on which action was had	4,993	3,492,208 21
Remaining on hand July 1, 1883	11,974	4,323,355 28

In addition to the above there were received 138 claims of a miscellaneous character amounting to $19,259.64; and 216 of that character, amounting to $39,769.28, received action and were reported to the accounting officers of the Treasury.

Also, in compliance with the act of August 7, 1882, the claim of Julia A. Nutt, widow and executrix of Haller Nutt, deceased, growing out of the occupation and use, by the United States Army, of his estate, was investigated and reported to Congress, as required by said act, on the 22d of December, 1882, through the honorable Secretary of War. The amount of this claim, as stated, was $1,065,264.74.

The following statement shows the total number and aggregate amount of claims presented under section 300 A, Revised Statutes (act of July 4, 1864, &c.), and action thereon since the passage of the act:

Year when presented.	Total received.		Approved.		Disallowed in claims on which allowances were made.	Rejected.	
	Number.	Amount.	Number.	Amount.		Number.	Amount.
1864–'65	2,590	$1,687,858 25	783	$273,860 30	$56,736 17	1,404	$1,023,420 87
1865–'66	13,219	7,731,253 83	2,230	877,151 76	280,008 30	7,419	4,792,306 79
1866–'67	7,068	3,307,903 24	1,197	479,640 84	263,470 61	3,102	1,634,068 81
1867–'68	2,778	1,602,870 74	401	248,124 71	157,449 77	603	387,704 80
1868–'69	847	670,542 82	173	106,406 78	47,645 51	222	142,006 45
1869–'70	637	610,757 22	119	66,681 45	24,596 98	113	196,598 18
1870–'71	590	1,800,004 58	47	26,216 71	47,765 42	60	132,148 17
1871–'72	1,124	1,483,314 18	665	367,102 72	410,234 95	274	396,100 75
1872–'73	1,963	2,024,725 16	642	296,775 90	318,436 52	325	443,689 75
1873–'74	2,606	3,144,572 34	881	495,234 38	537,250 47	528	694,152 19
1874–'75	2,044	2,345,315 22	403	188,581 63	352,882 33	871	1,314,460 29
1875–'76	1,098	1,204,834 38	302	186,229 50	237,210 51	1,254	1,995,767 89
1876–'77	836	679,202 04	460	155,272 52	295,796 44	642	1,352,159 88
1877–'78	1,408	902,490 99	967	255,084 99	337,791 09	1,345	1,741,197 86
1878–'79	1,640	961,420 00	635	121,568 26	199,517 37	1,032	1,077,212 92
1879–'80	12,757	7,527,051 56	594	157,650 70	156,814 19	921	738,420 46
1880–'81	44	37,290 08	1,149	227,680 39	344,898 93	1,995	1,885,173 82
1881–'82	124	142,916 05	1,389	296,346 39	349,691 41	1,630	1,302,700 82
1882–'83	71	44,388 91	1,879	312,151 70	573,383 13	3,114	2,606,673 38
Total	53,744	38,308,661 59	14,916	5,137,762 13	4,991,580 10	26,854	23,855,964 08

RECAPITULATION.

Number of claims presented from July 4, 1864, to June 30, 1883		53,744
Number approved from July 4, 1864 to June 30, 1883	14,916	
Number disallowed from July 4, 1864, to June 30, 1883	26,854	
Total acted upon		41,770
Number on hand July 1, 1883		11,974
Amount of 53,744 claims presented		$38,308,661 59
Amount of 41,770 claims acted upon		33,985,306 31
Remaining claims (11,974)		4,323,355 28

Very respectfully, your obedient servant,

B. C. CARD,
Quartermaster, U. S. A.

The QUARTERMASTER-GENERAL, U. S. ARMY.

7.—*Report of R. N. Batchelder, deputy quartermaster-general, United States Army, of the affairs relating to the care and maintenance of national military cemetries, for the fiscal year ending June* 30, 1883.

OFFICE OF NATIONAL CEMETERIES,
Washington, D. C., July 31, 1883.

GENERAL: I have the honor to submit the following report of affairs relating to the care and maintenance of the national military cemeteries for the fiscal year ending June 30, 1883.

At the close of the last fiscal year there were eighty-one national cemeteries, and during the year the number has been increased one by the addition of the soldiers' lot in the Woodland Cemetery at Quincy, Ill.

On July 1, 1882, there were 67 superintendents in service. During the year 7 have been appointed, 1 resigned, 1 was discharged, 1 died, and 1 appointment was canceled, leaving 70 in service June 30, 1883.

In the national cemeteries there are now 321,369 interments, of which 385 have been made during the year.

The contracts for furnishing headstones for soldiers' graves in private, village, and city cemeteries were closed last year; but the work ordered under them has not yet been fully completed.

These contracts were made in 1879, and the long delay in the accomplishment of the work thus undertaken, and the difficulties in bringing the business to a satisfactory close, have led the Department to make arrangements for furnishing at the quarries, to be shipped to the applicants direct, such additional stones as may be required for the graves in these cemeteries. In this manner some 1,400 stones were supplied in March and April last, at a cost of $2.25 each, being less than the average price under the previous contracts, exclusive of transportation. The stones were shipped by the Department to 287 different addresses, and have reached the consignees promptly.

In April last 1,354 marble headstones were furnished and erected at graves of prisoners of war, employés, freedmen, and other civilians in the Arlington and Soldiers' Home cemeteries, thus removing a portion of the unsightly and rapidly decaying boards with which these graves have been marked. More will be furnished, from time to time, as means will permit, until all graves in the national cemeteries are supplied with neat, permanent headstones, at less cost, in the end, than to renew and maintain the perishable headboards.

The new roadway to the Chattanooga National Cemetery, specially authorized by Congress, has been finished, with the exception of covering the rough macadam with gravel, for which an appropriation of $2,500 has been made, and proposals for the work have been invited.

The construction of the roadway to the Mound City National Cemetery, provided for by the act of July 3, 1882, is in progress. The road has been raised and graded, and the work of graveling is now being done.

In connection with this work, the levee ditches surrounding the cemetery have been filled, raised, and graded, affording a thorough protection to the grounds from overflow and seepage, and forming a handsome drive around the entire inclosure. This cemetery suffered considerable damage from the recent floods before this improvement was completed.

Under the act of July 11, 1882, authorizing the construction of a roadway to the New Albany, Ind., National Cemetery, operations were commenced last fall. Unfavorable weather has caused delay, but the work is now approaching completion.

The granite archway, with ornamental wrought-iron gates, at the Marietta National Cemetery has been completed, and the inclosing wall and grounds at the entrance improved.

Substantial and commodious outbuildings, with laborer's cottage, have been built at the Vicksburg Cemetery.

Rostrums, or speakers' stands, for use on occasions of public ceremonies, have been constructed at the Fort Leavenworth, Fort Scott, Marietta, Mound City, and Stone's River cemeteries.

At the Nashville Cemetery new water service has been introduced, affording abundant supply for all purposes required.

A carefully selected assortment of choice trees and plants has been furnished for the cemeteries where greater variety of shrubbery was deemed desirable, and the attention of superintendents has been specially directed to the care and cultivation of trees, as a most important branch of their duties.

The purchase of additional land for the Loudon Park National Cemetery, near Baltimore, Md., has been completed. Improvements rendered necessary by the extension of the grounds have been provided for, and proposals for the work have been invited.

By the act of March 3, 1883—deficiency appropriations for 1882–'83—the sum of $150,000 was appropriated for the purchase of the Arlington estate. Accordingly, a deed, bearing date of the 31st of March, 1883, was executed by George W. C. Lee, conveying to the United States the title to this property, which was approved by the Attorney-General May 8, 1883. See inclosures marked B and C.

Upon the recommendation of the Department of Justice, the sum of $125,000 of the purchase money was, by direction of the Secretary of War, paid May 18, 1883, the balance of $25,000 being withheld until all claims against the estate for taxes shall have been satisfactorily settled.

The plan adopted for the improvement of the Potomac River in and about the harbor of Washington, authorized by recent legislation, and which contemplates the conversion of the river flats into a handsome park, suggests the propriety of extending these improvements to embrace the land acquired by this purchase.

The Arlington grounds cover an area of 1,100 acres, with a frontage of nearly a mile on the south banks of the Potomac.

The reclamation of the flats, as projected, and now under way, will give to the city a park of some 700 acres, extending almost to the Virginia shore. To connect this park with the Arlington grounds, by means of a bridge, will more than double this area, and afford much needed means of convenient access to the Arlington Cemetery and the post of Fort Myer.

The national cemetery itself has already been made a beautiful and attractive feature of the suburbs of the city. Ornamented with natural forest, to which choice shrubbery has been added; improved with many handsome avenues and drives; provided with substantial and imposing entrances, and maintained with care, it is wanting only in facilities to reach it conveniently and pleasantly.

With its advantages of location, commanding, as it does, the river and city, and forming the very background of the landscape, it seems intended by nature as essential to the completeness of the improvements now being made in close proximity to its borders.

Without specifying more fully the many reasons which may justly be urged in favor of this proposition, I submit the suggestion for consideration.

The Board of Commissioners of the Soldiers' Home has recently transferred to the War Department, for the use of the Soldiers' Home National Cemetery, the ground belonging to that institution lying north of the Harewood road and adjoining the present national cemetery, including the plat heretofore used by the Home for burial purposes, for which they request an appropriation by Congress of $15,000 in payment therefor.

For the ground now occupied by the national cemetery the Soldiers'

Home has received no compensation, and the appropriation asked includes payment for the whole, some fifteen acres in all.

The want of sufficient space within the cemetery inclosure has long been felt, and this extension of the grounds will enable the Department to provide for future interments and afford much needed conveniences and accommodations for the annual decoration ceremonies.

At the Cypress Hills National Cemetery, near Brooklyn, N. Y., but little space is available for interments, and this will soon be occupied. Its location is near two large cities, among whose population there are many ex-soldiers and ex-sailors, who, by law, have right to burial in a national cemetery. The applications for the interment here of those who are entitled to this privilege are numerous and increasing yearly. The extension of the cemetery has, therefore, become an imperative necessity.

A bill having this object in view was reported upon favorably by the Military Committee of the House of Representatives at the first session of the Forty-seventh Congress (H. R. 6738, report No. 1607), but failed to become a law.

The following is an extract from the report of the committee referred to:

> It is estimated that there are now living in the counties of New York, Kings, Queens, and Richmond not less than 50,000 veterans of the war of the rebellion, and that out of this number probably one-tenth will avail themselves of the privilege of burial at Cypress Hills National Cemetery, under the law above quoted.
>
> The several military posts in and around New York Harbor have no other place to bury their dead, and from the increase of interments, as shown by the records, the present contemplated addition of grounds will not be more than will be required in the near future.

This bill contemplated the purchase of 2⅔ acres of land from the Cypress Hills Cemetery Company, at a cost of some $35,000, but it is ascertained that suitable ground outside the cemetery, and conveniently near it, can be procured at about $1,200 per acre for a tract of about 13 acres, taken as a whole.

Negotiations are now pending with a view to securing this ground while it can be purchased to advantage. It is hoped that early and favorable action by Congress in this matter may be had.

Inclosed herewith is a statement showing in detail the expenditures on account of these cemeteries during the year.

With these means they have been kept in good order, and many necessary improvements have been made.

Each year they increase in beauty, and the appreciation of the care bestowed upon them by the Government is attested by the interest manifested by the public in their perpetual welfare.

Very respectfully, your obedient servant,

R. N. BATCHELDER,
Deputy Quartermaster-General, U. S. Army,
In Charge of National Cemeteries.

A.—*Statement of disbursements of appropriations for national cemeteries during the fiscal year ending June 30, 1883.*

Name of cemetery.	Walls.			Repair of lodges.	Rent of quarters.	Out-houses (sheds, stables, &c).	Green-houses.	Trees, plants, &c.	Employés.	Drainage.
	Construction.	Repair.	Gates.							
Alexandria, La									$270 00	
Alexandria, Va		$607 35		$1 35					397 00	
Andersonville, Ga									622 33	
Annapolis, Md		29 93		15 00		$10 00		$10 00	130 00	$64 50
Antietam, Md				20 50					738 33	
Arlington, Va		12 20	$713 00	45 00		57 86	$1,894 20	18 70	5,852 99	6 90
Ball's Bluff, Va									25 00	
Barrancas, Fla				18 75					203 75	
Baton Rouge, La				21 74					360 00	
Battle Ground, D. C										
Beaufort, S. C				5 25				6 00	589 49	
Beverly, N. J				65 50		1 00				
Brownsville, Fla				40 00				25 00	245 00	
Camp Butler, Ill		265 00						12 00	480 58	
Camp Nelson, Ky									225 00	
Cave Hill, Ky				14 40		85				
Chalmette, La									860 50	
Chattanooga, Tenn		708 79		27 28					2,211 78	
City Point, Va				5 00					225 00	
Cold Harbor, Va									6 00	
Corinth, Miss				26 50		1,060 80			774 50	
Crown Hill, Ind										
Culpeper, Va									220 00	
Cypress Hills, N. Y				10 00				40 00	180 00	
Danville, Ky									100 00	
Danville, Va		14 00						8 00	47 00	6 00
Fayetteville, Ark									142 86	
Finn's Point, N. J				6 00				9 21		
Florence, S. C									205 00	
Fort Donelson, Tenn				24 48					72 00	
Fort Gibson, Ind. T				35 00				25 00	100 00	
Fort Harrison, Va		10 00		10 00		7 70		5 00		
Fort Leavenworth, Kans				60 00		1,946 75		10 00	400 00	
Fort McPherson, Nebr			5 00	10 00				20 00	202 00	
Fort Scott, Kans			793 00			1,718 00			225 00	
Fort Smith, Ark				226 30					281 62	
Fredericksburg, Va			95					3 00	588 00	14 50
Gettysburg, Pa		40 00		10 00		4 00		50 00	657 00	
Glendale, Va										
Grafton, W. Va				10 00		5 00			177 00	
Hampton, Va		6 00		39 50					412 50	34 11
Jefferson Barracks, Mo								55 00	1,295 33	
Jefferson City, Mo				58 25				20 20	56 08	

Keokuk, Iowa						19 85				
Knoxville, Tenn		9 90		3 16					177 00	12 00
Laurel, Md									40 00	
Lebanon, Ky	$1,370 37			39 00		20 00			76 00	17 50
Lexington, Ky									60 00	
Little Rock, Ark				20 00					270 00	
Loudon Park, Md					$208 00				45 00	
Marietta, Ga		7 00	10,590 00	9 50		1,500 00			943 90	
Memphis, Tenn		218 00							1,315 00	
Mexico City, N. Mex									199 00	
Mill Springs, Ky				34 63						
Mobile, Ala				12 75				12 00	117 50	
Mound City, Ill				32 00		1,948 00		3 50	406 49	
Nashville, Tenn		526 10				48 00			1,845 87	
Natchez, Miss		29 50		18 72					544 00	
New Albany, Ind						30 07		9 02	292 50	
New Berne, N. C				23 00		5 00			180 00	
Philadelphia, Pa			5 00		208 60				566 75	
Pittsburgh Landing, Tenn									375 00	
Poplar Grove, Va				10 90					227 50	
Port Hudson, La									236 00	34 20
Quincy, Ill					35 60				8 95	
Raleigh, N. C				14 15					207 96	
Richmond, Va				20 00					416 58	2 50
Salisbury, N. C				10 50		3 00			180 25	
San Antonio, Tex		6 97						10 00		
Seven Pines, Va				9 95					83 17	
Soldiers' Home, D. C									733 11	
Springfield, Mo						25 00			165 13	
Staunton, Va									48 00	
Stone's River, Tenn				27 45		1,738 57			566 25	
Vicksburg, Miss						3,860 00			3,265 32	
Wilmington, N. C				2 00		19 00			88 00	
Winchester, Va				25 00			1 40		213 75	
Woodlawn (Elmira), N. Y			100 00						100 00	25 00
Yorktown, Pa				9 20					114 66	
Soldiers' lots									225 00	
Printing and advertising										
Miscellaneous								1,817 85	5,982 68	
Total	1,370 37	2,490 74	12,206 95	1,122 71	452 20	14,028 45	1,895 60	2,169 48	39,894 96	217 21

A.—*Statement of disbursements of appropriations for national cemeteries during the fiscal year ending June 30, 1883*—Continued.

Name of cemetery.	Barrack and office furniture.	Tools and miscellaneous stores.	Improvement of grounds.	Flagstaffs and monuments.	Water supply.	Purchase of land, examining titles, &c.	Interments and headstones.	Lawn mowers.	Total.
Alexandria, La		$63 38	$67 25						$400 63
Alexandria, Va		9 10	6 25	$15 00	$50 00	$200 00			1,286 05
Andersonville, Ga		145 25	559 91	133 50					1,460 99
Annapolis, Md		28 60	150 00	8 00	35 00				481 03
Antietam, Md		46 89	38 98	10 00	3 80				858 50
Arlington, Va	$1 00	348 74	140 25		79 50	431 50			9,601 84
Ball's Bluff, Va									25 00
Barrancas, Fla		45 40		1 00	20				269 10
Baton Rouge, La		31 77	76 50						490 01
Battle Ground, D. C		41 12	4 00		5 00				50 12
Beaufort, S. C		5 25			75 00				680 99
Beverly, N. J		18 00							84 50
Brownsville, Tex	12 00	7 50							329 50
Camp Butler, Ill	25 50	33 17	46 50						862 75
Camp Nelson, Ky		18 52	35 02						278 54
Cave Hill, Ky		3 00	23 53	200 00	12 85				254 63
Chalmette, La		46 97	341 80	8 00					1,257 27
Chattanooga, Tenn	10 50	52 90	871 95						3,883 20
City Point, Va		33 75	90 10	5 00					358 85
Cold Harbor, Va		28 20	7 50	58 50					100 20
Corinth, Miss	14 95	51 40	265 25	3 25					2,196 65
Crown Hill, Ind		11 00		10 00					21 00
Culpeper, Va		31 48	325 70						577 18
Cypress Hills, N. Y		10 00	860 00		10 00		$114 00		1,224 00
Danville, Ky			10 00	12 00					122 00
Danville, Va		21 43	15 00						111 43
Fayetteville, Ark		23 75	40 47						207 08
Finn's Point, N. J		68 18	5 00						88 39
Florence, S. C	8 00	35 18		11 50					259 68
Fort Donelson, Tenn		12 20	347 09						455 77
Fort Gibson, Ind. T		25 00	15 00	75 00	50 00				325 00
Fort Harrison, Va		30 35							63 05
Fort Leavenworth, Kans		30 00			15 00				2,461 75
Fort McPherson, Nebr		1 50			10 00				248 50
Fort Scott, Kans		29 80	238 12						2,998 92
Fort Smith, Ark		29 00	177 90	23 02					737 84
Fredericksburg, Va		126 00	709 98	14 68	60 00				1,517 11
Gettysburg, Pa		22 79	118 00	10 00					911 79
Glendale, Va		27 19	5 00	5 00					37 19
Grafton, W. Va		29 24	8 00	10 00	5 00				244 24
Hampton, Va		30 50	25 00						547 61
Jefferson Barracks, Mo		78 00	150 00						1,573 88
Jefferson City, Mo		16 15							145 68

Keokuk, Iowa		14 85			10 50				45 20
Knoxville, Tenn		73 02							275 08
Laurel, Md			10 00						50 00
Lebanon, Ky		45 36	136 45	126 00					1,830 68
Lexington, Ky			6 00						66 00
Little Rock, Ark		34 50	199 00						523 50
Loudon Park, Md		20 05	20 00	5 00		5,509 57			5,807 62
Marietta, Ga		65 14	1,086 45	10 00					14,211 99
Memphis, Tenn		131 15	36 05		35 00				1,735 20
Mexico City, N. Mex		36 00			100 00				335 00
Mill Springs, Ky		5 33	24 75						64 71
Mobile, Ala	14 67	39 00							195 92
Mound City, Ill		141 48	2,999 15						5,530 62
Nashville, Tenn		160 78	1,019 15		1,339 17				4,939 07
Natchez, Miss		38 35	112 00						742 57
New Albany, Ind		5 72	29 70						367 01
New Berne, N. C		25 00	8 00		11 50				252 50
Philadelphia, Pa	17 00	35 99	7 32						840 66
Pittsburgh Landing, Tenn		39 47	26 00						440 47
Poplar Grove, Va		43 84	43 00	5 00					330 24
Port Hudson, La		32 21		12 00					314 41
Quincy, Ill		79 00							123 55
Raleigh, N. C		36 50					56 50		315 11
Richmond, Va		56 30	42 00	3 38					540 76
Salisbury, N. C		17 20	43 40						254 35
San Antonio, Tex		24 28	40 87		30 73				112 85
Seven Pines, Va		17 94			5 00				116 06
Soldiers' Home, D. C		17 98	30 75						781 84
Springfield, Mo		48 15	66 85		8 00				318 13
Staunton, Va		32 55	15 00						95 55
Stone's River, Tenn		56 98	263 75	20 00	88 00				2,761 00
Vicksburg, Miss		77 59	1,733 27		7 50				8,943 68
Wilmington, N. C	7 50	24 91		5 40	2 10		20 25		169 16
Winchester, Va		24 54		12 00					276 69
Woodlawn (Elmira), N. Y			50 00						275 00
Yorktown, Va	24 45	31 00		20 00					199 31
Soldiers' lots									225 00
Printing and advertising									146 38
Miscellaneous		215 00	2,311 24				3,046 50	$1,776 91	15,150 18
Total	96 45	3,458 93	16,200 20	812 23	2,068 85	6,141 07	3,237 25	1,776 91	109,786 94

I certify the above statement is correct.

R. N. BATCHELDER,
Lieutenant-Colonel and Deputy Quartermaster-General, U. S. Army.

B.

This deed, made the thirty-first day of March, A. D. one thousand eight hundred and eighty-three, between George W. C. Lee, of the first part, and the United States of America, of the second part, witnesseth: That the said party of the first part, for and in consideration of the sum of one hundred and fifty thousand dollars ($150,000.00) to him in hand paid, the receipt whereof is hereby acknowledged, doth grant and convey unto the said party of the second part the following property, to wit: All that certain tract or body of land, situate in Alexandria County (formerly in Fairfax County), in the State of Virginia, commonly known as the Arlington House Estate, containing about eleven hundred acres, be the same ever so much the more or less, together with all the improvements and appurtenances thereto belonging, it being the identical tract or body of land which was conveyed by Girard Alexander and wife to John Park Custis, by deed bearing date December twenty-fifth, A. D. one thousand seven hundred and seventy-eight, and of him the said John Park Custis inherited by George W. P. Custis, who devised the same to the said party of the first part. For a further description of which said property reference is here made to the map or plat of a recent survey thereof, hereto annexed and made a part of this deed. And the said George W. C. Lee covenants that he will warrant generally the property hereby conveyed, and furthermore that he will save harmless, defend, and indemnify the said party of the second part from and against every manner of claim against or in respect of said property, whether in rem or in personam, and also from and against any and every claim for damages in respect of, or for the use and occupation of, said property; and he the said George W. C. Lee hereby releases unto the said party of the second part all claim that he may have or be entitled to, for and to the amount bid, or any part thereof, in behalf of the United States, on the tax sale of said property in the year one thousand eight hundred and sixty-four. And the said George W. C. Lee further covenants that he has the right to convey the said land to the grantee herein, that he has done no act to encumber the said land, and that he will execute such further assurances of the said land as may be requisite.

Witness the following signature and seal.

G. W. C. LEE. [SEAL.]

STATE OF VIRGINIA,
Rockbridge County, to wit:

I, W. T. Shields, a notary public for the county aforesaid, in the State of Virginia, do certify that George W. C. Lee, whose name is signed to the writing above, bearing date on the thirty-first day of March, 1883, has acknowledged the same before me, in my county aforesaid. Given under my hand this the 24th day of April, A. D. 1883.

W. T. SHIELDS,
Notary Public.

IN THE CLERK'S OFFICE OF ALEXANDRIA, COUNTY COURT,
May 14, 1883.

This deed received, with certificate annexed, and admitted to record. Teste.
[SEAL.] BENJ. AUSTIN,
Clerk.

Recorded in Liber F, No. 4, folio 257, and examined. Teste.

BENJ. AUSTIN,
Clerk.

C.

DEPARTMENT OF JUSTICE,
Washington, May 8, 1883.

SIR: I have the honor to return herewith the papers which accompanied your letters of the 6th and 21st ultimo, in relation to the proposed deed to the United States of the property in the State of Virginia known as Arlington, under the provisions of the act of March 3, 1883, entitled "An act making appropriations to supply deficiencies in the appropriations for the fiscal year ending June 30, 1883," &c.

By that act an appropriation of $150,000 is made "to enable the Secretary of War to remove all claims and pretensions in respect of" said property; but it provides that "this appropriation shall not be paid out of the Treasury until the Attorney-General shall be satisfied, and so certify to the Secretary of War, that the deed or deeds to be given to the United States to the end aforesaid will convey a complete title and contain covenants of general warranty and covenants against every manner

of claim against or in respect of said property, whether in rem or in personam, and also against all and every claim for damages in respect of, or the use and occupation of said property, and also a release by every person entitled of all claim for and to the amount bid, or any part thereof, in behalf of the United States, on the tax-sale of said property."

The property referred to (said to contain about 1,100 acres) was in 1864 purchased for the United States, pursuant to authority of law, at a tax-sale under the direct-tax acts of June 7, 1862, and February 6, 1863, and the United States have since occupied the same for public purposes, claiming title thereto under the tax-sale aforesaid. The validity of this title became involved in an action of ejectment brought by George W. C. Lee against Frederick Kauffman and others, which was commenced in the circuit court of Alexandria County, Virginia, in 1877, and thence removed into the United States circuit court for the eastern district of Virginia, where it was heard and determined in favor of the plaintiff. In that suit the title relied upon by the defendants was the title derived by the United States under the said tax-sale. The case was afterwards carried to the Supreme Court of the United States on a writ of error, and the judgment of the court below was there affirmed. (See Kauffman *v.* Lee, 106 U. S. Rep., 196.) The result of this litigation occasioned the enactment of the provision in the act of March 3, 1883, above adverted to.

Mr. Lee, the plaintiff in the above mentioned suit, offers, in consideration of the payment to him of the sum named in that provision, to give the United States a deed for said property, containing all the covenants together with the release required by the statute; and a deed conveying said property to the United States has been executed and acknowledged by him, and is submitted for the acceptance of the Government. He claims ownership of the property under the will of his grandfather, George Washington Parke Custis, who died seized thereof in the year 1857, and who inherited the same from his father, John Parke Custis, who died in the year 1781. The history of this title, which is derived under a grant made by the governor of Virginia in 1669, is given in the accompanying "Abstract of Title to the Arlington House Estate." A valid title to the whole of the premises is, in my opinion, thereby deduced to Mr. Lee (assuming, of course, the title of the United States under the said tax-sale to be invalid).

The deed executed by Mr. Lee bears date March 31, 1883, and was acknowledged April 24, 1883. It fulfills all the requirements of the aforesaid provision in the act of 1883 as regards covenants and releases; and in my opinion it will convey to the United States a complete title to the whole of the property referred to in that provision, subject, however, to an apparent lien for certain taxes assessed upon the property by the local authorities, to which my attention has been called by your letter of the 21st ultimo.

It appears by a statement of the county clerk of Alexandria County, Virginia, that there are assessed and due upon the said property, from 1863 to 1883, both years inclusive, taxes amounting to $19,228.87. By the law of Virginia taxes assessed upon real estate thereunder are made a lien upon the land. The taxes referred to constitute the only charge or incumbrance to which the property appears to be subject, and it is claimed in behalf of Mr. Lee that they have been illegally assessed.

But to protect the United States against this claim for taxes, it is proposed by his attorney, Mr. Page, that the deed be delivered, and that part of the consideration money (say $25,000) be retained by the Government in the Treasury of the United States until the Attorney-General shall be satisfied, and so certify to the Secretary of War, that the said claim for taxes has been discharged by payment, or settled in some other mode with the proper authorities, State and county, or shall be adjudged invalid; the grantor in said deed to use all reasonable diligence to effect a speedy extinguishment of said claim.

In my judgment the protection against such claim thus afforded would be ample, and I am of the opinion that the deed of Mr. Lee may properly be accepted upon the terms proposed.

I am, sir, very respectfully,

BENJAMIN HARRIS BREWSTER,
Attorney-General.

Hon. ROBERT T. LINCOLN,
Secretary of War.

WAR DEPARTMENT,
May 12, 1883.

Respectfully referred to the Quartermaster-General for proper action and payment of $125,000; the balance, $25,000, to be retained in the Treasury as within suggested. The title of the appropriation is "Purchase of the Arlington Estate," act March 3, 1883.

ROBERT T. LINCOLN,
Secretary of War.

The QUARTERMASTER-GENERAL, U. S. ARMY.

REPORT OF THE COMMISSARY-GENERAL OF SUBSISTENCE.

REPORT

OF THE

COMMISSARY-GENERAL OF SUBSISTENCE.

WAR DEPARTMENT,
OFFICE COMMISSARY-GENERAL OF SUBSISTENCE,
Washington, D. C., Oct. 8, 1883.

SIR: In compliance with your directions of 21st ultimo, I have the honor to submit the following report of the operations of the Subsistence Department for the fiscal year ending June 30, 1883:

RESOURCES AND EXPENDITURES.

The following statement exhibits the aggregate fiscal resources and expenditures of the department for the year mentioned, and the balances at the close of the fiscal year:

RESOURCES.

Amounts in the Treasury to the credit of appropriations of the Subsistence Department on June 30, 1882, as follows:		
Subsistence of the Army, 1881	$9,364 16	
Subsistence of the Army, 1882	1,428 62	
Relief of persons rendered destitute by overflow of Mississippi River	41 12	
		$10,833 90
Amounts to the credit of officers of the Subsistence Department, and of officers doing duty in the Subsistence Department, with the Treasurer, assistant treasurers, and designated depositaries, and in their personal possession, on June 30, 1882, as follows:		
Subsistence of the Army, 1881	$423 02	
Subsistence of the Army, 1882	399,931 88	
		400,354 90
Amounts refunded to the Treasury near close of fiscal year 1882, but not carried to the credit of the appropriations by June 30, 1882, since covered in as follows:		
Subsistence of the Army, 1880 and prior years	$9 48	
Subsistence of the Army, 1881	50	
Subsistence of the Army, 1882	983 64	
		993 62
Amounts appropriated for the Subsistence Department for the fiscal year ending June 30, 1883, as follows:		
Subsistence of the Army, 1883, act of June 30, 1882	$2,300,000 00	
Subsistence of the Army, 1879 and prior years, act of August 5, 1882	2,007 12	
Subsistence of the Army, 1880 and prior years, act March 3, 18-3	1,105 95	
Twenty per cent. additional compensation prior to July 1, 1879, act August 5, 1882	98 00	

Amounts appropriated for the Subsistence Department, &c.—Continued.		
Twenty per cent. additional compensation prior to July 1, 1880, act March 3, 1883	$846 53	
Commutation of rations to prisoners of war in rebel States prior to July 1, 1879, act August 5, 1882, and warrant of the Secretary of the Treasury	19,177 25	
Commutation of rations to prisoners of war in rebel States prior to July 1, 1880, act March 3, 1883	13,776 25	
Claims for quartermaster's stores and commissary supplies, act July 4, 1864, per act March 1, 1883, being portion for commissary supplies	4,922 90	
		$2,341,934 00
Amounts collected from various sources during the fiscal year 1883, in process of cover into the appropriations of the Subsistence Department on June 30, 1883, as follows:		
Subsistence of the Army, 1881	$61 32	
Subsistence of the Army, 1882	11 13	
Subsistence of the Army, 1883	43 40	
		118 85
Amounts collected from various sources and refunded to the appropriations of the Subsistence Department on the books of the Treasury during the fiscal year 1883, as follows:		
Subsistence of the Army, 1880 and prior years	$1,170 02	
Subsistence of the Army, 1881	605 78	
Subsistence of the Army, 1882	24,200 33	
Subsistence of the Army, 1883	55,916 93	
Commutation of rations to prisoners of war in rebel States (indefinite)	396 25	
Relief of persons rendered destitute by overflow of Mississippi River	691 20	
		82,980 51
Amount refunded on the books of the Treasury under act of March 3, 1875 (18 Stat. Large, 418), as follows:		
Subsistence of the Army, 1880, transfer account	$448 12	
Subsistence of the Army, 1881, transfer account	60,779 52	
		61,227 64
Amounts received from sales of public property to be deposited as "miscellaneous receipts"		41 27
Amount received by officers of the Subsistence Department, and by officers doing duty in the Subsistence Department, from sales of subsistence stores to the following purchasers, during the fiscal year 1883, and taken up for immediate disbursement under the appropriation Subsistence of the Army, 1883:		
Sales to officers of the Army, $460,523.51; to enlisted men, $307,741.01; to companies, detachments, and hospitals, $186,622.46; to civil employés, $24,985.91; to Fort Leavenworth Military Prison, $24,877.59; to surveyors, $3,837.66; to railroad engineers, $478,62; to civil employés of Smithsonian Institution, $42.76; to geographical and geological surveyors, $1,592.17; to Princeton College exploring expedition, $141.18; to soldiers' reunion, $5; to headquarters of the Army, $20.59; to Indian agents, $253.79; to Quartermaster's Department, $873.22; of condemned stores at auction, $6,669.02; of boxes, barrels, &c., $625.15; of garden seeds and agricultural implements, $496.94; total		1,019,786 58
Amounts taken up by officers doing duty in the Subsistence Department, on account of reclamations for stores lost, damaged, &c., and in correction of errors in their accounts, &c., during the fiscal year 1883:		
Subsistence of the Army, 1883		1,388 61
Amount collected from representatives of deceased officers:		
Subsistence of the Army, 1882		718 62
Amounts in hands of representatives of deceased officers to be collected:		
Subsistence of the Army, 1878	$109 84	
Subsistence of the Army, 1882	248 63	
		358 47
Amounts charged against deceased, resigned, and dismissed officers, on account of funds alleged to have been lost by theft, &c., as follows:		
Subsistence of the Army, 1879 and prior years		3,000 89

Amounts charged against officers still in service on account of funds alleged to have been lost by theft, &c., and for which relief can only be obtained in the Court of Claims under sections 1059 and 1062, Revised Statutes, as follows:		
Subsistence of the Army, 1879 and prior years	$2,772 86	
Subsistence of the Army, 1880	393 96	
Subsistence of the Army, 1881	265 47	
Subsistence of the Army, 1882	39 18	
		$3,471 47
Total resources		3,927,209 33

EXPENDITURES.

Amounts expended on the books of the Treasury from the appropriations of the Subsistence Department during the fiscal year 1883, as follows:		
Subsistence of the Army, 1879 and prior years, act August 5, 1882	$2,007 12	
Subsistence of the Army, 1880, act March 3, 1883	1,105 95	
Subsistence of the Army, 1881	51 84	
Subsistence of the Army, 1882	713 91	
Subsistence of the Army, 1883, transferred to appropriation "salaries of civil employés in lieu of general service, or detailed enlisted men, 1883"	76,562 88	
Commutation of rations to prisoners of war in rebel States prior to July 1, 1879, act August 5, 1882	19,175 50	
Commutation of rations to prisoners of war in rebel States prior to July 1, 1880, act March 3, 1883	13,776 25	
Claims for quartermaster's stores and commissary supplies, act July 4, 1864, per act March 1, 1883, being portion for commissary supplies	4,890 90	
Twenty per cent. additional compensation prior to July 1, 1879, act August 5, 1882	98 00	
Twenty per cent. additional compensation prior to July 1, 1880, act March 3, 1883	846 53	
		119,228 88
Amounts disbursed by officers of the Subsistence Department, and officers doing duty in the Subsistence Department, during the fiscal year 1883, as follows:		
Subsistence of the Army, 1881	$417 19	
Subsistence of the Army, 1882	399,931 88	
Subsistence of the Army, 1883	2,626,320 89	
		3,026,669 96
Amounts dropped by officers doing duty in the Subsistence Department in correction of errors in their accounts during the fiscal year 1883:		
Subsistence of the Army, 1883		219 78
Amount allowed by Court of Claims in case of alleged loss of funds by theft (18 C. Cls. Reports, p. 1):		
Subsistence of the Army, 1879 and prior years		1,823 15
Amount transferred on books of Treasury, act March 3, 1875 (18 Stat. Large, 418):		
Subsistence of the Army, 1880 and prior years, transfer account		448 12
Amount deposited to the credit of the Treasurer of the United States and covered into the Treasury as "miscellaneous receipts on account of sale of public property"		41 27
Amounts carried to the surplus fund on June 30, 1883:		
Subsistence of the Army, 1881 and prior years, transfer account, act March 3, 1875 (18 Stat. Large, 418)	$60,779 52	
Subsistence of the Army, 1880 and prior years	1,179 50	
Subsistence of the Army, 1881	9,918 60	
		71,877 62
Total expenditures		3,220,308 78

BALANCES.

Amounts in the Treasury to the credit of appropriations of the Subsistence Department on June 30, 1883, as follows:

Subsistence of the Army, 1882	$26,617 30	
Subsistence of the Army, 1883	75,925 88	
Relief of persons rendered destitute by overflow of Mississippi River	732 32	
Claims for quartermaster's stores and commissary supplies, act July 4, 1864, per act March 1, 1883, being portion for commissary supplies	32 00	
Commutation of rations to prisoners of war in rebel States prior to July 1, 1879, act August 5, 1882	1 75	
Commutation of rations to prisoners of war in rebel States (indefinite)	396 25	
		$103,705 50

Amounts to the credit of officers of the Subsistence Department, and of officers doing duty in the Subsistence Department, with the Treasurer, assistant treasurers, and designated depositaries, and in their personal possession on June 30, 1883, as follows:

Subsistence of the Army, 1881	$5 83	
Subsistence of the Army, 1883	579,547 59	
		579,553 42

Amounts remitted by the Treasury near close of fiscal year 1883, but not taken up by officers by June 30, 1883:

Subsistence of the Army, 1883	10,000 00

Amounts refunded to the Treasury near close of fiscal year 1883, but not carried to the credit of the appropriations by June 30, 1883:

Subsistence of the Army, 1881	$64 32	
Subsistence of the Army, 1882	11 13	
Subsistence of the Army, 1883	7,202 51	
		7,277 96

Amounts in hands of representatives of deceased officers to be collected:

Subsistence of the Army, 1878	$109 84	
Subsistence of the Army, 1882	248 63	
Subsistence of the Army, 1883	1,246 83	
		1,605 30

Amounts charged against officers (deceased and resigned) on account of funds alleged to have been lost by theft, &c., as follows:

Subsistence of the Army, 1879 and prior years	3,000 89

Amounts charged against officers still in service on account of funds alleged to have been lost by theft, &c., and for which relief can only be obtained in the Court of Claims under sections 1059 and 1062, Revised Statutes, as follows:

Subsistence of the Army, 1879 and prior years	$949 71	
Subsistence of the Army, 1880	393 96	
Subsistence of the Army, 1881	265 47	
Subsistence of the Army, 1882	39 18	
Subsistence of the Army, 1883	109 16	
		1,757 48
Total balances		706,900 55

SUPPLIES.

The Subsistence Department is charged with the duty of purchasing and issuing to the Army such supplies as enter into the composition of the ration, and of procuring and keeping for sale to officers and enlisted men such articles as may from time to time be designated by the inspectors-general of the Army.

ıe articles composing the ration issued to the enlisted men of the y are as follows:

	Peas.	Vinegar.
ı.	Rice.	Candles.
	Hominy.	Soap.
and bread.	Coffee.	Salt.
neal.	Tea.	Pepper.
ı.	Sugar.	Yeast powder.

ıe articles designated by the inspectors-general to be kept for sale ficers and enlisted men are as follows:

ice, ground.	Gelatine.	Pine apples, canned.
:s, canned.	Ginger, ground.	Pins.
:s, dried or evaporated.	Ham (deviled), canned.	Pipes, briarwood.
ragus, canned.	Hams, sugar cured.	Pipestems.
ı, breakfast.	Hops.	Potatoes.
:ing, shoe.	Jam (blackberry), canned.	Preserves (damsons), canned.
ng.	Jelly (currant), canned.	Prunes.
ıes, blacking.	Lard, in tins.	Raisins.
ıes, clothes.	Lobsters, canned.	Salmon, canned.
ıes, hair.	Macaroni.	Salt, table.
ns, whisk.	Mackerel (fresh), canned.	Sardines.
ır.	Matches, safety.	Sauce (cranberry), canned.
ıpeners.	Milk, canned.	Sauce, Worcestershire.
se.	Mushrooms, canned.	Shrimp, canned.
-con-carne.	Mustard.	Soaps, toilet.
olate.	Nutmegs.	Soups (assorted), canned.
:s.	Needles.	Starch, corn.
amon, ground.	Needle-books.	Starch, laundry.
s, canned.	Oatmeal.	Sugar, cut loaf.
:s, ground.	Oil, olive.	Sugar, granulated.
e, choice.	Onions.	Sirup.
ıs.	Oysters, canned.	Tapioca.
(green), canned.	Peaches, canned.	Thread.
s, canned.	Peaches, dried or evap'd.	Tobacco.
kers, assorted.	Pears, canned.	Tomatoes, canned.
ıring extract, lemon.	Peas, green.	Tongue, canned.
ıring extract, vanilla.	Pepper, red.	Towels.
', family.	Pickles, in jars.	Wheat, cracked.

rior to July 1, 1879, subsistence stores were sold to officers and en- d men at cost price, but in the act making appropriation for the ıort of the Army for the fiscal year commencing July 1, 1879, it provided that "to the cost of all stores and other articles [subsist-] sold to officers and enlisted men, except tobacco [to the latter], as ided for in section 1149 of the Revised Statutes, 10 per centum shall lded to cover wastage, transportation, and other incidental charges." same proviso, substantially, was enacted in each subsequent ap- ıriation act for the support of the Army, until that for the fiscal year ng June 30, 1884, from which it was omitted. In consequence of omission it was a question whether the stores should not, after June 1883, be sold at cost price, under the general law (section 1144 Re- d Statutes) as it existed prior to the special proviso referred to; upon submitting the question to the Secretary of War, it was de- d by him that the legislation referred to was continuous. The ad- ıal 10 per centum, therefore, is still charged on all sales to officers enlisted men, except on sales of tobacco to enlisted men, and on s to companies, detachments, and hospitals, these sales being by required to be made at cost price.

SOURCES OF SUPPLY OF SUBSISTENCE STORES.

ıbsistence supplies for the Army are purchased as near the points ınsumption as practicable, regard being had to their quality and

prices as compared with those of stores at more remote points, and to the cost of transportation from place of purchase to place of issue or sale. The greater portions of the supplies have, during the past year, been procured, as usual, in the large markets of the country, such as New York, Chicago, San Francisco, Saint Louis, New Orleans, &c., but fresh meat, and, to a great extent, flour and fresh vegetables, have been obtained from dealers and producers at or near the points of issue.

In consequence of the completion of another transcontinental railroad and the extension of other railroad lines into the Territories, direct rail communication is now had with a large number of Army posts, by which the department is enabled to supply these posts with fresh stores more frequently than formerly, and with much less cost to the Government and with much less loss from deterioration than heretofore. The rapid development of the country along the lines of these railroads will also enable the department to procure a considerable portion of the more bulky, heavy, and important articles of the ration in the vicinity of the posts.

ADVERTISEMENTS AND CONTRACTS.

During the fiscal year ended June 30, 1883, 118 newspaper advertisements and 87 circulars and posters inviting proposals for subsistence stores were reported to this office. There were also reported 2,217 contracts of various kinds for fresh meats, complete rations, and other supplies required for the subsistence of the Army.

Statement of the average contract prices per pound (independent of quantities purchased) in each State and Territory for fresh beef for supply of the Army in the fiscal years 1883 *and* 1884.

State or Territory.	Average price per pound.		State or Territory.	Average price per pound.	
	1883.	1884.		1883.	1884.
	Cents.	*Cents.*		*Cents.*	*Cents.*
Maine	11.75	10.25	Missouri	7.83	7.49
Massachusetts	14.21	10.73	Minnesota	9.35	8.95
Rhode Island	10.00	9.62	Nebraska	8.45	8.35
Connecticut	15.00	9.23	Kansas	7.15	7.76
New York	12.08	10.31	Indian Territory	6.16	8.93
Pennsylvania	13.94	13.87	Wyoming	9.10	9.37
Maryland	11.93	10.99	Dakota	10.39	10.18
District of Columbia	9.50	7.94	New Mexico	8.98	11.27
Virginia	9.12	7.61	Colorado	8.77	11.18
Georgia	12.00	10.00	Utah	8.62	9.37
Florida	8.62	11.50	Montana	9.18	10.94
Alabama	12.50	12.00	California	9.90	9.80
Louisiana	12.00	9.90	Arizona	12.34	10.76
Arkansas	6.97	9.00	Washington	5.38	9.36
Texas	5.48	8.90	Idaho	7.05	9.83
Kentucky	6.50	12.00	Nevada	12.00	13.25
Ohio	6.15	8.60	Oregon	8.96	10.75
Indiana	8.00	9.48			
Illinois	8.00	10.00	Average for each year	10.11	10.01
Michigan	11.42	11.17			

This statement reveals an unexpected fact, in this, that although there has been generally a decline in the price of beef in the States and Territories that are consumers rather than raisers of cattle, there has been generally a rise in price in those which furnish the cattle for consumption in the others. Thus, while the price has declined on the Atlantic Coast, it has increased in the States along the Ohio River, and generally on the great plains and in the extreme Northwest.

OBSERVATIONS AND EXPLORATIONS IN THE ARCTIC SEAS.

Fall and winter of 1882.

It was learned in November last that, on account of the failure of the relief expedition to Lady Franklin Bay to reach its destination, the subsistence supplies transferred to an officer of the Signal Corps in June, 1882, for the use of the Lady Franklin Bay party, had been returned to St. John's, Newfoundland, and that it was the intention of the Chief Signal Officer to keep them at that place and send them out with another expedition to be dispatched during the present year. Knowing how rapidly subsistence stores deteriorate, and how likely it was that some of those returned were in a damaged condition from the sea voyage they had undergone, the Commissary-General advised the Secretary of War that these stores should not be kept on hand another year and again sent out to a station so remote and so difficult to reach. As it is deemed best in all cases to furnish to the Army stores of the latest crop and as fresh as practicable, the Commissary-General of Subsistence considered that if stores were wanted another year for the party in the Arctic Seas fresh ones, and not those old ones, should be sent. He therefore recommended that they be returned to the United States for immediate use by the Army, or to be otherwise disposed of as might appear best after their arrival. This was approved by the Secretary of War, and nearly all of the stores were returned to the United States in January last. Such of them as were suitable were issued to the Army, and the damaged ones after due examination by a board of survey and inspector were sold in New York. Of the stores not returned a portion was unaccounted for, and a portion, it was ascertained from the Signal Bureau, was cached by the relief expedition at Cape Sabine and Littleton Island. The board of survey was informed by letter from the Chief Signal Officer that the Signal Bureau assumed responsibility for all the missing stores, and that they would all be accounted for.

Spring and summer of 1883.

In March, 1883, a requisition was received at this office for a large amount of stores for the Franklin Bay expedition, accompanied by letter from the Signal Bureau, stating that, "In the sundry civil bill which passed the recent Congress the sum of $5,000 was appropriated for the purchase of these stores, but owing to some oversight this money was not made immediately available, as was the money for the expenses of the expedition," and suggesting, therefore, that the Subsistence Department be directed to purchase the stores, with the understanding that it was to be reimbursed "as soon as the appropriation made in the sundry civil bill becomes available." The attention of the Secretary of War was invited by the Commissary-General of Subsistence to the fact that the large quantity of stores called for would cost more than the sum appropriated, and he recommended that, if purchased by the Subsistence Department, the amount be limited to $5,000. To this the Chief Signal Officer replied that "the stores are absolutely necessary, and that it is necessary to replace the stores sent back from St. John's, Newfoundland, to New York, and to provide, in addition, a supply for Lieutenant Greely's party for the time which will probably be spent at Littleton Island before the ship can get up in 1884." As the case was evidently an urgent one, the stores being, as stated by the Chief Signal Officer, "absolutely necessary" for the expedition to Lady Franklin Bay, and

for the party already there, supplies to the amount of $9,916.27 were, by authority of the Secretary of War, furnished by the Subsistence Department in May last, with the understanding that reimbursement to the extent of $5,000 would be made to it from the appropriation made in the sundry civil bill for purchases of subsistence supplies for the expedition.

ISSUES TO INDIANS.

Subsistence supplies were issued to Indians during the fiscal year ended June 30, 1883, to the following amounts:

Date.	To whom issued.	Amount.
July, 1882, to April, 1883	To Sitting Bull's band of Uncapapa Sioux Indian prisoners of war at Fort Randall, Dakota.	$8,529 28
May and June, 1883	To same as above at Fort Yates, Dakota	728 53
July, 1882, to June, 1883	To Warm Spring Apache Indian prisoners of war at Fort Union, New Mexico.	1,732 62
October, 1882, to June, 1883	To Apache and Ute prisoners of war at Fort Riley, Kansas	274 72
April and May, 1883	To Cree Indian prisoners at Fort Assinniboine, Montana Territory.	314 11
May and June, 1883	To Cree Indian prisoners at Fort Maginnis, Montana Territory.	111 19
April, May, and June, 1883	To Chiricahua Indian prisoners of war in the field and at San Carlos, Arizona Territory.	2,125 09
July, 1882, to June, 1883	To Indian prisoners of war at various posts and of different tribes.	214 91
May, 1883	To Creek Indian prisoners at Fort Reno, Indian Territory.	49 23
May and June, 1883	To Creek Indian prisoners at Fort Gibson, Indian Territory.	4,682 04
July, 1882, to June, 1883	To Indians visiting posts under Army Regulations 2182 and 2183.	678 84
July, 1882, to June, 1883	To friendly Indians	168 94
July, 1882, to June, 1883	To destitute Indians	603 81
Total		20,213 31

Being $16,983.41 less than in the previous year.

MISCELLANEOUS ISSUES AND EXPENDITURES.

In the fiscal year ended June 30, 1883, commanding officers caused 4,865 rations to be issued in cases not specially provided for by regulations. Of these 1,027 were for the subsistence of citizens held in military custody; 2,072 were for citizens within the sanitary cordon in the vicinity of Fort Brown, Tex., during a yellow fever epidemic; 105 for Mexican women recaptured from the Chiricahua Indians by Brigadier-General Crook's command in Mexico, in June, 1883. The remainder were issued at remote posts on the frontier to persons suffering and destitute, who might without such aid have perished.

In September, October, November, and December, 1882, 3,119 rations were issued to enlisted men of the United States Marine Corps while at Mount Vernon Barracks, Ala.

For the subsistence of recruiting parties and recruits at rendezvous, 88,757⅓ rations, cooked, were purchased at a cost of $44,955.46, or at an average cost of $50\frac{6527}{10000}$ cents per ration (or board for one day), an increase of a little more than eight-tenths of a cent per ration over the average for the previous year. The disbursements for liquid coffee for enlisted men traveling by cars, stages, &c., amounted $8,867.60; for extra duty service of enlisted men detailed for duty in the subsistence department at posts, $12,830.80; for advertising for proposals, &c., $6,010.84.

LOSSES OF STORES AND PROPERTY.

The returns of subsistence stores for the fiscal year ended June 30, 1883, show losses in transportation for which no one was found responsible, and by extraordinary wastage, &c., amounting to $13,350.21, which is $596.89 less than losses from like causes in the preceding fiscal year.

During the fiscal year stores were lost in transportation and the responsibility therefor fixed, amounting to			$1,719 75
Of this there has been collected and accounted for by officers, or covered into the Treasury	$929 24		
And there has been collected, but not yet covered in	37 00		
		966 24	
Leaving a balance yet to be collected of			753 51

The following losses, also, have been reported as having occurred by storm, fire, accident, theft, &c., during the fiscal year:

Where.	Cause, per reports.	When.	Value.
In the field, Texas	By accident	Reported in July and August, 1882.	$11 21
At Fort Hale, Dak	By death (cattle)	Reported in August, 1882	88 44
At Fort Bowie, Ariz	By storm	August 4, 1882	13 10
At Fort Columbus, New York Harbor.	By theft	Reported in August, 1882	5 76
At Fort Meade, Dak	By death (cattle)	Reported in September and October, 1882.	186 43
At Fort Stevenson, Dak	do	Reported in September, 1882	57 60
At Fort Warren, Mass	By theft	Reported in October and December, 1882.	110 48
At Ojo Caliente, N. Mex	By fire	Reported October, 1882	26 67
At Camp Price, Ariz	By rai storm	do	7 02
At Fort Lowell, Ariz	By theft	do	313 82
At Fort Sill, Ind. T	do	Reported December, 1882	179 55
At Fort Sidney, Nebr	By rats	do	14 96
At Fort Stevenson, Dak	By death (cattle)	January 19, 1883	50 76
At Fort Huachuca, Ariz	By theft	Reported in February, 1883	4 75
En route to Fort Spokane, Wash.	do	February 7, 1883	21 40
At Rocky Point, en route to Fort Maginnis, Mont.	do	Reported in March, 1883	2 80
In the field, near Richmond, N. Mex.	Accident	Reported in April, 1883	18 85
At Fort Bowie, Ariz	By theft	Reported in May, 1883	26 19
At Fort McDermitt, Nev	By fire	February 9, 1883	13 05
At Fort McKavett, Tex	By theft	April 17, 1883	10 52
Between Pagosa Springs, Col., and Amargo, N. Mex.	Accident	March 6, 1883	7 10
En route to camp, Poplar River, Mont.	Wreck	May 8, 1883	203 80
En route to and near Fort Verde, Ariz.	Contact with small-pox patient during transportation.	Reported in June, 1883	510 17
En route to Lady Franklin Bay, and returning to New York.	Part cached at Cape Sabine and Littleton Island, and part unaccounted for	Between June, 1882, and February, 1883.	337 75
Total			2,222 18

The subsistence stores brought before inspectors and condemned during the fiscal year, as reported on returns from all parts of the country, was in value, at original cost, $21.330.06; there was realized from the sale of these $6,669.02; leaving a net loss of $14,661.04, which is less than 1 per cent. on the value of all stores supplied. When it is remembered that articles of food are in their nature very perishable, and that they are necessarily subjected to exposure and the deteriorating influences of the extremes of heat and cold on the long routes over which they have to be transported, and at the military posts on the frontiers, so small a loss is remarkable, and clearly indicates that the stores must have been of excellent quality and well cared for.

ARMY COOKING.

During the past year a new edition of the Manual for Army Cooks has been published. This manual furnishes to the troops numerous useful receipts for cooking articles supplied by the Subsistence Department, and usually obtainable at military posts or camps, and will aid them in securing a variety in cooking which is known to be conducive to their health and comfort. The full benefit, however, cannot be attained unless the troops actually receive and are permitted to use the whole of the ration allowed by law. Flour, for example, is often required for use in the company kitchen; but, under existing regulations, all the flour ration drawn by companies must be turned into the post bakery, the savings of which do not go to the company, but to the post fund, and what flour is required in the kitchen has to be purchased out of the company fund, raised by savings on other parts of the ration. It is well known that the ration of flour allowed by law, and issued by the Subsistence Department, is ample, but only about two-thirds of it reaches the soldier. In my opinion, the regulation in regard to carrying the saving on flour belonging to companies to the credit of the post fund should be so amended as to provide expressly that the soldier shall have the benefit of the whole flour ration (deducting only the expenses of converting it into bread), and to this end that the net savings on the flour, arising from making it into bread, shall (after deducting expenses of bakery) be divided among the companies in proportion to the flour contributed by each company to the bakery.

I have, in several previous reports, invited attention to the necessity of providing good cooks and bakers for the Army. They are essential for preserving the health and securing the comfort and efficiency of the troops. It matters not how great in quantity or how good in quality may be the raw articles of food furnished by the Subsistence Department, the soldier will not be sufficiently or properly and wholesomely subsisted if the articles are not properly cooked. The best flour in the hands of a bad baker will produce bad bread, and the best of meat and vegetables will, from the hands of a poor cook, afford the soldier only unwholesome and unpalatable food. It would, therefore, be in the interest of the well-being of the soldier, if provision were made by law for the special enlistment of men as cooks and bakers. Of cooks there should be one for each company, troop, or battery, and of bakers, one to each garrisoned military post or station. I commend the matter to the attention of higher authority and of Congress.

CIVIL EMPLOYÉS IN THE SUBSISTENCE DEPARTMENT OF THE ARMY.

The act making appropriations for the support of the Army for the fiscal year 1884, limited the amount that could be applied to the payment of employés of the Subsistence Department of the Army, in that fiscal year, to $105,000.

Prior to the passage of the act I was called upon to report the lowest number of employés necessary in the Subsistence Department, and the least amount that need be paid them. The following is an extract from that report, dated January 29, 1883:

> The number of employés paid from the appropriation for subsistence of the Army, as well as their compensation, is regulated by the Secretary of War, and the number authorized by him under date June 30, 1875, is limited to 61 clerks and 87 others—

total, 148. The number employed and salaries paid are carefully scrutinized by me, and both are reduced whenever and wherever the interests of the service will permit. When practicable to make a reduction, I have caused it to be made without waiting for orders to do so, and constantly keep the force within the limit fixed by the Secretary of War. I have caused reductions to be made from time to time until, as shown by inclosed report, the number employed is only 51 clerks and 62 others, being 35 less than authorized. * * * The number is kept at the lowest limit possible, consistent with efficient service, and the same man is often required to perform several duties, as of cooper and laborer, clerk and inspector. The employés are efficient men and experienced in their duties in the department, and I do not consider that it is practicable, without injury to the service, to reduce the present number or their compensation. In fact any considerable movement of troops or active operations would require an immediate increase.

Although the number and compensation of the employés in the Subsistence Department were already, in my opinion, as small as was consistent with efficiency, it became necessary to reduce them still further, in order to bring the expenditure within the amount appropriated, and before the commencement of the present fiscal year the necessary instructions were sent to officers of the department throughout the country reducing the amounts heretofore authorized, necessitating the discharge of some, and a considerable reduction in the salaries of others. The experience of the past three months since the reduction was made has confirmed me in the views expressed in my report above quoted.

The officers of the department, almost without exception, have already requested an increase in the allotment at their stations, urging that it is impracticable to conduct the business of the department intrusted to them with the promptness, care, and efficiency that the best interests of the service require, unless the amount allowed for payment of employés is increased. These officers are men of experience, thoroughly understand their duties, and have the interest of the service at heart. They represent that, although the employés who have served with them for many years still continue with them on the reduced pay, in hope that the former rates will be restored next year, they cannot be retained much longer at these rates, and that it will not be practicable to fill their places at such rates with experienced and competent men. In view of the fact that the number of employés absolutely necessary at the various stations depends entirely upon the amount of work to be done, which varies with the exigencies of the service, it would seem that the number and compensation of employés should be left, as heretofore, to the discretion of the Commissary-General, under the supervision and direction of the Secretary of War. The fact that, as shown by the records and reports, the number and compensation of employés in the Subsistence Department have been in the past kept at the lowest point consistent with efficiency, habitually considerably below the limit then fixed, would seem to indicate that the regulation of their number might, in the future, as in the past, be safely left to the head of the bureau under the direction of the Secretary of War, the more especially as in case of any exigency creating an unusual demand, such a restriction as now exists, would very seriously cripple the efficiency of the department. I therefore hope that the Secretary of War will invite attention to the matter and recommend that the next appropriation for subsistence of the Army be made without this recent restriction, leaving to the War Department, as heretofore, the duty of regulating the number and compensation of employés for the Subsistence Department according to the varying necessities of the service.

COMMISSARY SERGEANTS.

At the commencement of the last fiscal year the number of commissary sergeants in service was		146
During the year the following were discharged:		
At their own request	9	
By reason of expiration of term of service	1	
By sentence of court-martial	2	
For incompetency or unfitness	3	
On surgeon's certificate of disability	2	
		17
		129
There were appointed during the year		5
Total in service June 30, 1883		134

The administrative duties of the Subsistence Department at the various posts required the introduction of a new class of non-commissioned staff officers into the Army, and the grade of commissary sergeants was authorized by Congress in 1873, upon the recommendation of the Commissary-General of Subsistence, approved by the Secretary of War. The grade was professedly created "for the purpose of attaching to the Subsistence Department an intelligent corps of non-commissioned officers, whose experience would be of value to the department." The experience of ten years has fulfilled anticipations and demonstrated the value to the Army of these sergeants, picked men, carefully selected from worthy soldiers whose character and capacity have been shown during the years of faithful service they must render before they are eligible to appointment. They hold an honorable position, take a pride in their duties, and by their knowledge of and attention to the stores on hand, guard them from the damage to which, without constant care, they would be exposed. With very rare exceptions they have shown themselves worthy of the trust confided to them, and have amply repaid the Government all they have cost it.

ACCOUNTS AND RETURNS.

Accounts and returns on hand June 30, 1882, received and examined during the fiscal year ended June 30, 1883, and on hand June 30, 1883, awaiting examination, as follows:

On hand June 30, 1882, accounts current	246
Received during year ended June 30, 1883, accounts current	2,664
On hand June 30, 1882, returns of subsistence stores	247
Received during year ended June 30, 1883, returns of subsistence stores	2,156
On hand June 30, 1882, returns of subsistence property	2
Received during year ended June 30, 1883, returns of subsistence property	860
Total	6,155

During the fiscal year ended June 30, 1883, accounts and returns were examined and sent to Third Auditor, as follows:

Accounts current, 2,656, with 41,300 vouchers; returns of subsistence stores, 2,153, with 30,896 vouchers; returns of subsistence property, 857, with 2,210 vouchers.

On hand at close of fiscal year ended June 30, 1883, awaiting examination:

Accounts current	254
Returns of subsistence stores	230
Returns of subsistence property	5
Total	489

In connection with the examination of the foregoing, 5,146 letters were written, 1,097 referred, and 294 papers copied. Eight hundred and

three returns of official postage-stamps, accompanied by 2,276 vouchers, were examined and filed during same fiscal year.

CLAIMS.

Act of July 4, 1864 (section 300 B, Revised Statutes).

There were on file in this office on July 1, 1882, awaiting examination under the third section of the act of July 4, 1864, and the acts and joint resolutions supplementary to said act, 715 claims; during the year 32 more were received from the office of the Third Auditor of the Treasury, and that of the Quartermaster-General of the Army, for consideration, and 3 disallowed (old) claims were reopened upon additional evidence, making, in all, 750 claims to be acted upon.

Formal decisions were rendered during this period in 634 cases of this class of claims. Of these 23, amounting to $4,414.37, were allowed in the sum of $2,567.23, and recommended to the Third Auditor of the Treasury for payment, and 611, amounting to $395,070.88, were disallowed.

There remained on hand July 1, 1883, awaiting examination and decision, under this act, 116 claims.

It now seems probable that during the current fiscal year all claims originally filed in this office under the act of July 4, 1864 (300 B, Revised Statutes), will be examined and passed upon by the Commissary-General of Subsistence, as required by the statute. Some new claims under that statute may be received by reference from the Third Auditor of the Treasury for examination and recommendation. These belong to a class involving both quartermaster and subsistence supplies, filed in the office of the Quartermaster-General prior to January 1, 1880. Having been there examined in relation to the quartermaster's items, they will also require examination by the Commissary-General of Subsistence as to the subsistence items.

The wisdom of the act of March 3, 1879, barring the further presentation of claims under 300 B, Revised Statutes, becomes more and more apparent as we recede from the period between 1861 and 1864, in which these war claims originated. As early as 1872, the Commissary-General of Subsistence in his annual report stated:

> The task, originally very difficult, of investigating and deciding these cases with equity and justice, becomes daily more so from the passing away by deaths and removals, and from imperfect memories after lapse of so long a period, of so many officers and others alleged to have taken or received the stores, or to have knowledge of them, * * * while these very difficulties but add security, if not increased facilities, to the prosecution of fraudulent claims, * * * and a proper examination of them requires more time and attention than the Commissary-General is able to give them, without neglecting other and, in my opinion, more important duties appertaining to the Subsistence Department, and he should be relieved from this duty.

Each year's experience furnishes additional proof of the correctness of these views, and now, ten years later, it is found, except in very rare cases, that officers and others, when appealed to concerning the facts of these claims, can give but vague and unsatisfactory information, founded on fragmentary impressions lingering in their memories, if they retain any recollection whatever of such matters occurring from eighteen to twenty years ago, and which were not then regarded of more than passing importance.

Further legislation is greatly needed as to claims filed in this office under the act of July 4, 1864, that have been examined and not recommended for payment by myself or predecessors. The act of 1864 is explicit as to the disposition to be made of the claims in which a decision favorable to the claimant is reached by the Commissary-General of Sub-

sistence. He is required "to report each case for payment to the Third Auditor of the Treasury, with recommendation for settlement." The act is not so clear as to what disposition is to be made of the claims in which the decision is against the claimant. There is no expressed limitation as to the time within which the claims are to be considered, nor as to the number of times they can be reopened and re-examined. As a result, claimants, either directly or by former or new attorneys, press upon the Commissary-General of Subsistence the reopening and re-examination of claims that have been years before carefully examined and decided adversely to the claimant.

I have frequently, heretofore, in my annual reports recommended that the examination of this whole class of war claims be transferred from this bureau to some other tribunal.

I now earnestly recommend that Congress be urged to fix some future date for the termination of action by the Commissary-General of Subsistence under 300 B, Revised Statutes, and that some tribunal be established or designated, to which all such claims on file in this office, whether pending or disallowed, shall be transferred. I make this recommendation, being satisfied that the best interests of the Government will be subserved thereby.

Joint resolutions of July 25, 1866, and third section of act of March 2, 1867.

At the commencement of the fiscal year there were on file in this office 1,512 claims for commutation of rations to Union soldiers while held as prisoners of war, and during the year 1,489 claims were received, making a total of 3,001 claims of this class for examination. Of these, 111 were not reached for examination; 1,860 were partially examined; 1,030 examined and decided, of which 752 were rejected, and 278, amounting to $10,460 were allowed and recommended to the Third Auditor of the Treasury for payment. Besides this, 9 rejected (old) claims were re-examined upon additional evidence, and again rejected.

Miscellaneous claims.

In addition to claims under the above-mentioned special acts of Congress, there were at the commencement of the fiscal year 503 miscellaneous claims on hand, and during the year 405 claims were received. Of these 908 claims, 144 were recommended for payment in the aggregate sum of $1,477.03; 278 were rejected; 476 were partially examined, and 10 were not reached for examination. Besides these, 27 rejected (old) claims were re-examined upon additional evidence and again rejected.

Letters and indorsements.

In connection with the three classes of claims mentioned, 10,473 communications were sent out during the year. Besides this, many briefs of evidence and extended examinations of official records were made.

DUTIES AND STATIONS OF OFFICERS OF THE SUBSISTENCE DEPARTMENT.

The duties and stations of officers of the Subsistence Department on the 30th day of June, 1883, will appear from the roster hereto appended.

During the year the officers of the department have been actively and efficiently employed.

Very respectfully, your obedient servant,

R. MACFEELY,
Commissary-General of Subsistence.

Hon. the SECRETARY OF WAR.

Roster of the Subsistence Department, United States Army, June 30, 1883.

Name and rank in the department.	Rank by brevet.	Duty and station.
COMMISSARY-GENERAL OF SUBSISTENCE.		
Brigadier-General.		
Robert Macfeely		Commissary-General of Subsistence.—Washington, D. C.
ASSISTANT COMMISSARIES-GENERAL OF SUBSISTENCE.		
Colonels.		
Marcus D. L. Simpson	Bvt. Major-General, March 13, 1865.	Chief C. S. Mil. Division of the Missouri.—Chicago, Ill.
Henry F. Clarke	Bvt. Major-General, March 13, 1865.	Chief C. S., Mil. Div. of the Atlantic and Department of the East.—Governor's Island, New York, N. Y.
Lieutenant-Colonels.		
William W. Burns	Bvt. Brig. General, March 13, 1865.	Purchasing and Depot C. S. at Baltimore, Md.
Amos Beckwith	Bvt. Major-General, March 13, 1865.	Purchasing and Depot C. S. at St. Louis, Mo.
Beekman Du Barry	Bvt. Col., March 13, 1865.	Assistant to the Commissary-General of Subsistence.—Washington, D. C.
COMMISSARIES OF SUBSISTENCE.		
Majors.		
Thomas J. Haines	Bvt. Brig. General, March 13, 1865.	On sick leave.
George Bell	Bvt. Brig. General, April 9, 1865.	Chief C. S., Dept. of the Missouri, and Purchasing and Depot C. S. at Fort Leavenworth, Kans.
Michael R. Morgan	Bvt. Brig. General, April 9, 1865.	Chief C. S. Mil. Div. of the Pacific, and Dept. of California.—Presidio of San Francisco, San Francisco, Cal.
John P. Hawkins	Bvt. Major-General, March 13, 1865.	Purchasing and Depot C. S. at New York City, N. Y.
Michael P. Small	Bvt. Brig. General, April 9, 1865.	Chief C. S. Dept. of Texas, and Purchasing and Depot C. S. at San Antonio, Tex.
Thomas C. Sullivan	Bvt. Lt. Col., March 13, 1865.	Purchasing and Depot C. S. at San Francisco, Cal.
John W. Barriger	Bvt. Brig. General, March 13, 1865.	Purchasing and Depot C. S. at Chicago, Ill.
Thomas Wilson	Bvt. Brig. General, March 13, 1865.	Chief C. S., Dept. of the Platte, and Purchasing and Depot C. S. at Omaha, Nebr.
Captains.		
William H. Bell	Bvt. Major, March 13, 1865.	Chief C. S, Dept. of the South, and Purchasing C. S. at Cincinnati, Ohio.—Address, Newport Barracks, Newport, Ky.
Jeremiah H. Gilman	Bvt. Lt. Col., Dec. 31, 1862.	Assistant to the Commissary-General of Subsistence.—Washington, D. C.
Samuel T. Cushing	Bvt. Major, March 13, 1865.	On special duty in office Commissary-General of Subsistence, Washington, D. C.
William A. Elderkin	Bvt. Major, March 13, 1865.	Chief C. S., Dept. of the Columbia, and Purchasing and Depot C. S. Vancouver Barracks, Wash.
Charles B. Penrose	Bvt. Lt. Col., Nov. 11, 1867.	Chief C. S., Dept. of Dakota, and Purchasing and Depot C. S. at Fort Snelling, Minn.
William H. Nash	Bvt. Major, Nov. 17, 1865.	Purchasing and Depot C. S. at Washington, D. C.
Charles P. Egan		Chief C. S., Dept. of Arizona.—Prescott, Ariz.
Fred. F. Whitehead	Bvt. Major, March 2, 1867.	Purchasing and Depot C. S. at New Orleans, La.
John F. Weston		Purchasing and Depot C. S. at Boston, Mass.
Charles A. Woodruff		Chief C. S., District of New Mexico, and Post C. S. at Fort Marcy, N. Mex.—Santa Fe, N. Mex.
John J. Clague		Purchasing and Depot C. S. at Helena, Mont.
Wells Willard	Bvt. Capt., March 2, 1867.	Purchasing and Depot C. S. at Cheyenne, Wyo.

List of officers on duty as acting commissaries of subsistence, the stations at which they performed duty, and the period of their service during the fiscal year ended June 30, 1883.

Name of officer.	Rank and regiment.	Station.	Period of service.
Atwood, Edwin B	Capt. & A. Q. M.	Columbus Barracks, Ohio.	July 1, 1882, to March 31, 1883.
Andrus, Edwin P	Lt. 5th Cav	Fort Robinson, Nebr	July 1, 1882, to March 31, 1883.
Do	do	Fort McKinney, Wyo	May 12, 1883, to June 30, 1883.
Ames, Robert F	Lt. 8th Inf	Fort Yuma, Cal	July 1, 1882, to November 30, 1882.
Adams, Thomas R	Lt. 5th Art	Plattsburg Barracks, N. Y.	August 1, 1882, to September, 25, 1882.
Avery, Frank P	Lt. 3d Inf	Fort Missoula, Mont	August 1, 1882, to March 31, 1883.
Arnold, Isaac	Maj. of Ord	Indianapolis Arsenal, Ind.	October 6, 1882, to June 30, 1883.
Ames, Luther S	Lt. 2d Inf	Fort Spokane, Wash.	November 1, 1882, to June 30, 1883.
Augur, Colon	Lt. 2d Cav	San Antonio, Tex	November 1, 1882, to November 30, 1882.
Ayres, Charles G	Lt. 10th Cav	Pena Colorado, Tex	April 24, 1883, to June 30, 1883.
Barrett, Gregory, jr	Lt. 10th Inf	Fort Wayne, Mich	July 1, 1882, to June 30, 1883.
Bailey, Hobart K	Lt. 5th Inf	Saint Paul, Minn	July 1, 1882, to March 31, 1883.
Do	do	Fort Keogh, Mont	June 1, 1883, to June 30, 1883.
Barth, Charles H	Lt. 12th Inf	Camp Price, Ariz	July 1, 1882, to August 16, 1882.
Bailey, Edward L	Lt. 4th Inf	In the field, Wyoming	July 1, 1882, to September 19, 1882.
Baker, Frank	Lt. of Ord	Benicia Arsenal, Cal	July 1, 1882, to April 30, 1883.
Barry, Thomas H	Lt. 1st Inf	Fort Grant, Ariz	September 1, 1882, to November 30, 1882.
Do	do	do	March 1, 1883, to June 30, 1883.
Baxter, John, jr	Lt. 9th Inf	Fort McKinney, Wyo	April 1, 1883, to May 12, 1883.
Bailey, Harry L	Lt. 21st Inf	Fort Townsend, Wash	April 18, 1883, to June 30, 1883.
Best, Clermont L., jr	Lt. 1st Art	Presidio of San Francisco, Cal.	July 1, 1882, to June 30, 1883.
Belcher, John H	Major & Q. M.	David's Island, New York Harbor.	September 1, 1882, to June 30, 1883.
Benteen, Frederick W	Maj. 9th Cav	174 Hudson street, New York City.	October 20, 1882, to January 31, 1883.
Beck, William H	Lt. 10th Cav	Pena Colorado, Tex	December 1, 1882, to April 24, 1883.
Blunt, Albert C	Lt. 5th Art	Plattsburg Barracks, N. Y.	July 1, 1882, to July 31, 1882.
Blauvelt, William F	Lt. 15th Inf	Fort Lyon, Colo	July 1, 1882, to November 30, 1882.
Bliss, Tasker H	Lt. 1st Art	Point San José, Cal	July 1, 1882, to July 31, 1882.
Booth, Charles A	Capt. & A. Q. M.	Camp near Yorks, Ariz	July 1, 1882, to December 5, 1882.
Do	do	Columbus Barracks, Ohio.	April 1, 1883, to June 30, 1883.
Brant, Louis P	Lt. 1st Inf	Holbrook, Ariz	July 1, 1882, to October 6, 1882.
Brush, Daniel H	Lt. 17th Inf	Fort Yates, Dak	July 1, 1882, to June 30, 1883.
Brennan, James	Lt. 17th Inf	Fort A. Lincoln, Dak	July 1, 1882, to November 30, 1882.
Brown, Rufus P	Lt. 4th Inf	Fort Omaha, Nebr	February 1, 1883, to June 30, 1883.
Brereton, John J	Lt. 24th Inf	Fort Elliott, Tex	October 1, 1882, to June 30, 1883.
Buttler, William C	Lt. 3d Inf	Fort Ellis, Mont	July 1, 1882, to June 30, 1883.
Burnham, David R	Lt. 15th Inf	Fort Randall, Dak	December 1, 1882, to December 31, 1882.
Budlong, Alton H	Lt. 9th Cav	Fort Hays, Kans	November 1, 1882, to June 30, 1883.
Carland, John	Lt. 6th Inf	Fort Hall, Idaho	July 1, 1882, to July 5, 1882.
Do	do	do	July 11, 1882, to March 8, 1883.
Do	do	Fort Douglass, Utah	March 11, 1883, to June 30, 1883.
Carlton, Guy	Lt. 2d Cav	Fort Maginnis, Mont	July 1, 1882, to May 1, 1883.
Califf, Joseph M	Lt. 3d Art	Fort Brooke, Fla	July 1, 1882, to October 31, 1882.
Carter, William H	Lt. 6th Cav	Fort Apache, Ariz	July 1, 1882, to September 30, 1882.
Do	do	Fort Lowell, Ariz	January 1, 1883, to June 30, 1883.
Catley, Henry	Lt. 2d Inf	Fort Colville, Wash	July 1, 1882, to November 6, 1882.
Capron, Thaddeus H	Lt. 9th Inf	Fort Bridger, Wyo	April 10, 1883, to June 30, 1883.
Campbell, William J	Lt. 22d Inf	Fort Lewis, Colo	December 1, 1882, to June 30, 1883.
Campbell, Peter	Lt. 18th Inf	Fort Assiniboine, Mont	December 1, 1882, to June 30, 1883.
Carrington, Frank de L	Lt. 1st Inf	Willcox, Ariz	March 26, 1883, to June 23, 1883.

List of officers on duty as acting commissaries of subsistence, &c.—Continued.

Name of officer.	Rank and regiment.	Station.	Period of service.
Chubb, Charles S. J	Lt. 17th Inf	Fort Pembina, Dak	July 1, 1882, to August 19, 1882.
Chamberlin, John L	Lt. 1st Art	Alcatraz Island, Cal	July 1, 1882, to November 30, 1882.
Chatfield, Walter H	Lt. 5th Inf	Camp Villard, Mont	July 21, 1882, to December 21, 1882.
Chance, Jesse C	Lt. 13th Inf	Fort Selden, N. Mex	October 11, 1882, to December 11, 1882.
Chynoweth, Edward	Lt. 17th Inf	Fort Sisseton, Dak	November 1, 1882, to June 30, 1883.
Chance, Josiah	Lt. 17th Inf	Fort A. Lincoln, Dak	December 1, 1882, to June 30, 1883.
Clark, Sidney E	Lt. 2d Inf	Fort Cœur d'Alène, Idaho	July 1, 1882, to June 30 1883.
Clark, Dillard H	Lt. 15th Inf	Fort Randall, Dak	January 1, 1882, to June 30, 1883.
Cooke, Geo. F	Lt. 15th Inf	Fort Garland, Colo	July 1, 1882, to November 11, 1882.
Cowles, Calvin D	Lt. 23d Inf	Fort Bayard, N. Mex	July 1, 1882, to December 31, 1882.
Do	do	Fort Craig, N. Mex	January 1, 1883, to June 30, 1883.
Colladay, Samuel R	Lt. 10th Cav	Fort Stockton, Tex	July 1, 1882, to June 30, 1883.
Cotton, Gilbert P	Lt. 1st Art	Point San José, Cal	August 1, 1882, to September 30, 1882.
Cobb, Edmund M	Lt. 2d Art	Fort McHenry, Md	December 1, 1882, to June 30, 1883.
Cornish, George A	Lt. 15th Inf	Fort Pembina, Dak	December 10, 1882, to June 30, 1883.
Craig, Louis A	Lt. 6th Cav	Jefferson Barracks, Mo	November 1, 1882, to June 30, 1883.
Curry, James	Lt. 5th Art	Fort Hamilton, New York Harbor.	July 1, 1882, to July 10, 1882.
Cummings, Joseph F	Lt. 3d Cav	Fort Verde, Ariz	September 1, 1882, to February 15, 1883.
Davis, Edward	Lt. 3d Art	St. Augustine, Fla	July 1, 1882, to June 30, 1883.
Dapray, John A	Lt. 23d Inf	Camp near Richmond P.O. N. Mex.	July 1, 1882, to August 17, 1882.
Day, Russell H	Lt. 6th Inf	Fort Thornburgh, Utah	July 1, 1882, to October 18, 1882.
Davis, George B	Lt. 5th Cav	Fort Niobrara, Nebr	July 1, 1882, to June 30, 1883.
Davis, Britton	Lt. 3d Cav	San Carlos, Ariz	October 15, 1882, to June 30, 1883.
Davenport, Thomas C	Lt. 9th Cav	Fort Riley, Kans	October 1, 1882, to January 31, 1883.
Danes, Henry C	Lt. 3d Art	Fort Brooke, Fla	November 1, 1882, to January 10, 1883.
De Lany, Hayden	Lt. 9th Int	Fort McKinney, Wyo	July 1, 1882, to July 31, 1882.
Dent, John C	Lt. 20th Inf	Fort Hays, Kans	July 1, 1882, to October 31, 1882.
Dodge, Frederick L	Lt. 23d Inf	Mil. Prison, Fort Leavenworth, Kans.	July 1, 1882, to October 26, 1882.
Dougherty, William E	Capt. 1st Inf	Camp Hentig, Ariz	July 27, 1882, to October 17, 1882.
Dodd, George A	Lt. 3d Cav	Fort Grant, Ariz	December 1, 1882, to February 28, 1883.
Drum, John	Lt. 10th Inf	Fort Brady, Mich	July 1, 1882, to June 30, 1883.
Dudley, Edgar S	Lt. 2d Inf	Newport Barracks, Ky	July 1, 1882, to September 30, 1882.
Duncan, Joseph W	Lt. 21st Inf	Vancouver Barracks, Wash.	March 1, 1883, to June 30, 1883.
Ellis, Eugene A	Lt. 8th Cav	Fort Ringgold, Tex	July 1, 1882, to October 31, 1882.
Eastman, Frank F	Lt. 14th Inf	Camp on Snake River, Wyo.	July 1, 1882, to September 30, 1882.
Earnest, Cyrus A	Lt. 8th Inf	Fort Bidwell, Cal	July 1, 1882, to June 30, 1883.
Edwards, Frank A	Lt. 1st Cav	Fort Klamath, Oreg	July 1, 1882, to February 28, 1883.
Do	do	do	April 14, 1883, to June 30, 1883.
Ebstein, F. H. E	Lt. 21st Inf	Fort Canby, Wash	June 1, 1883, to June 30, 1883.
Evans, William P	Lt. 19th Inf	Mil. Prison, Fort Leavenworth, Kans.	October 26, 1882, to June 30, 1883.
Elliott, Charles P	Lt. 13th Inf	Fort Selden, N. Mex	December 11, 1882, to June 30, 1883.
Earle, Richard T	Lt. 2d Inf	Fort Lapwai, Idaho	December 1, 1882, to June 30, 1883.
Edwards, Eaton A	Lt. 25th Inf	Fort Meade, Dak	May 1, 1883, to June 30, 1883.
Farley, Joseph P	Maj. of Ord	Kennebeck Arsenal, Me	July 1, 1882, to April 16, 1883.
Foote, George F	Capt. 8th Cav	Jefferson Barracks, Mo	July 1, 1882, to October 31, 1882.

List of officers on duty as acting commissaries of subsistence, &c.—Continued.

Name of officer.	Rank and regiment.	Station.	Period of service.
Forbes, Theodore F	Lt. 5th Inf	Fort Keogh, Mont	July 1, 1882, to May 31, 1883.
Foster, Frederick W	Lt. 5th Cav	Fort Laramie, Wyo	July 1, 1882, to March 31, 1883.
Foster, Charles W	Lt. 3d Art	Camp Mitchell (Atlanta) Ga.	June 21, 1883, to June 30, 1883.
Fuger, Frederick	Lt. 4th Art	Fort Adams, R. I	July 1, 1882, to June 30, 1883.
Gardner, John H	Lt. 9th Cav	Fort Garland, Colo	November 11, 1882, to November 30, 1882.
Garvey, Thomas	Lt. 1st Cav	Fort Walla Walla, Wash	November 1, 1882, to March 31, 1883.
Gardener, Cornelius	Lt. 19th Inf	Fort Brown, Tex	December 1, 1882, to June 30, 1883.
Galbraith, Jacob G	Lt. 1st Cav	Boise Barracks, Idaho	February 1, 1883, to June 30, 1883.
Geary, William L	Lt. 12th Inf	Plattsburg Barracks, N. Y.	April 1, 1883, to June 30, 1883.
Getty, Robert N	Lt. 22d Inf	San Antonio, Tex	July 1, 1882, to October 31, 1882.
Do	do	Fort Garland, Colo	December 1, 1882, to June 30, 1883.
Gerlach, William	Lt. 3d Inf	Fort Missoula, Mont	July 1, 1882, to July 31, 1882.
Do	do	do	April 1, 1883, to June 30, 1883.
Gilman, Benjamin H	Lt. 13th Inf	Fort Wingate, N. Mex	July 1, 1882, to June 30, 1883.
Gilmore, Q. O'M	Lt. 8th Cav	West Point, N. Y	July 1, 1882, to June 30, 1883.
Glenn, Edwin F	Lt. 25th Inf	Fort Hale, Dak	July 1, 1882, to November 27, 1882.
Goe, James B	Lt. 13th Inf	Fort Cummings, N. Mex	July 1, 1882, to October 31, 1882.
Goodwin, Millard F	Lt. 9th Cav	Fort Riley, Kans	February 1, 1883, to April 30, 1883
Goodwin, Edward A	Lt. 8th Cav	Fort Duncan, Tex	April 18, 1883, to June 30, 1883.
Grealish, Michael J	Capt. O. S. K	Augusta Arsenal, Ga	July 1, 1882, to June 30, 1883.
Grumley, Edward I	Lt. 17th Inf	Fort Sisseton, Dak	July 1, 1882, to July 31, 1882.
Griffin, Eugene	Lt. of Engineers	Willets Point, New York Harbor.	July 1, 1882, to June 30, 1883.
Green, James O	Lt. 25th Inf	Fort Hale, Dak	November 27, 1882, to June 30, 1883.
Gustin, Joseph H	Lt. 14th Inf	Rawlins Depot, Wyo	July 1, 1882, to June 30, 1883.
Hardin, Edward E	Lt. 7th Inf	Fort Snelling, Minn	July 1, 1882, to November 10, 1882.
Hamner, William H	Lt. 20th Inf	Fort Gibson, Ind. Ter	July 1, 1882, to June 30, 1883.
Hay, Charles	Lt. 23d Inf	Fort Bliss, Tex	July 1, 1882, to June 30, 1883.
Hasson, Patrick	Lt. 14th Inf	Cantonment on Uncompahgre River, Colo.	July 1, 1882, to June 30, 1883.
Harmon, William R	Lt. 10th Cav	Pena Colorado, Tex	July 1, 1882, to July 31, 1882.
Hare, Luther R	Lt. 7th Cav	Fort Meade, Dak	July 6, 1882, to July 31, 1882.
Halloran, James	Lt. 12th Inf	Fort Thomas, Ariz	July 14, 1882, to August 31, 1882.
Harmon, Millard F	Lt. 1st Art	Fort Stevens, Oreg	August 1, 1882, to June 30, 1883.
Hall, William P	Lt. 5th Cav	Fort Sidney, Nebr	September 1, 1882, to June 30, 1883.
Heistand, H. O. S	Lt. 11th Inf	Camp Poplar River, Mont.	September 1, 1882, to June 30, 1883.
Homer, William B	Lt. 5th Art	Fort Schuyler, New York Harbor.	July 1, 1882, to June 30, 1883.
Hobbs, Charles W	Lt. 3d Art	Fort Barrancas, Fla	July 1, 1882, to April 30, 1883.
Hodges, Charles L	Lt. 25th Inf	Fort Randall, Dak	July 1, 1882, to November 30, 1882.
Do	do	Fort Snelling, Minn	January 1, 1883, to June 30, 1883.
Hoffman, William	Lt. 11th Inf	Fort Bennett, Dak	July 1, 1882, to October 18, 1882.
Hoyt, Ralph W	Lt. 11th Inf	Fort Sully, Dak	July 1, 1882, to June 30, 1883.
Hoppin, Curtis B	Lt. 2d Cav	Fort Custer, Mont	July 1, 1882, to June 30, 1883.
Hoyt, George S	Lt. 18th Inf	Fort Assinniboine, Mont	July 1, 1882, to November 30, 1882.
Howe, Walter	Lt. 4th Art	Fort Warren, Mass	October 1, 1882, to June 30, 1883.
Hodgson, Frederick G	Lt. 6th Cav	Fort Apache, Ariz	October 1, 1882, to November 30, 1882.
Honeycutt, John T	Lt. 1st Art	Alcatraz Island, Cal	December 1, 1882, to June 30, 1883.
Huston, Joseph F	Lt. 25th Inf	Fort Reno, Ind. Ter	July 1, 1882, to June 30, 1883.
Hubbard, Edward B	Capt., A. Q. M	Fort Huachuca, Ariz	July 1, 1882, to September 30, 1882.
Hutton, James A	Lt. 8th Inf	Fort Yuma, Cal	December 1, 1882, to May 20, 1883.
Humphreys, Charles	Lt. 3d Art	Fort Barrancas, Fla	May 1, 1883, to June 30, 1883.
Hunter, George K	Lt. 3d Cav	Fort Bowie, Ariz	May 17, 1883, to June 30, 1883.

List of officers on duty as acting commissaries of subsistence, &c.—Continued.

Name of officer.	Rank and regiment.	Station.	Period of service.
Hunt, Thomas B	Capt., A. Q. M	Fort Buford, Dak	June 1, 1883, to June 30, 1883.
Hyde, J. McE	Lt. 8th Inf	Fort Bowie, Ariz	July 1, 1882, to August 31, 1882.
Ingalls, Charles H	Lt. 6th Inf	Fort Hall, Idaho	July 5, 18-2, to July 11, 1882.
Do	do	do	March 8, 1883, to June 22, 1883.
Jacobs, Joshua W	Capt., A. Q. M	Fort Stanton, N. Mex	September 1, 1882, to June 30, 1883.
Jackson, James B	Lt. 7th Inf	In the field in Montana	July 1, 1882, to August 31, 1882.
Jones, Samuel R	Lt. 4th Art	Fort Warren, Mass	July 1, 1882, to September 30, 1882.
Jones, Francis B	Lt. 3d Inf	Fort Shaw, Mont	July 1, 1882, to November 30, 1882.
Do	do	do	June 1, 1883, to June 30, 1883.
Jouett, James S	Lt. 10th Cav	Camp near Presidoo, Tex	July 1, 1882, to January 22, 1883.
Johnson, Carter P	Lt. 4th Inf	Fort Fred. Steele, Wyo	July 1, 1882, to October 16, 1882.
Do	do	Fort Robinson, Nebr	March 31, 1883, to June 30, 1883.
Jones, Frank B	Lt. 22d Inf	Pagosa Springs, Colo	December 1, 1882, to February 9, 1883.
Jones, Thaddeus W	Lt. 10th Cav	Camp near Presideo, Tex	January 22, 1883, to June 21, 1883.
Johnson, Alfred B	Lt. 7th Inf	Fort Bridger, Wyo	January 1, 1883, to April 10, 1883.
Kane, John I	Lt. 24th Inf	Fort Supply, Ind. Ter	July 1, 1882, to October 31, 1882.
Kendall, Henry M	Capt. 6th Cav	Fort Grant, Ariz	July 1, 1882, to August 31, 1882.
Do	do	Fort Apache, Ariz	December 1, 1882, to June 30, 1883.
Kelton, Dwight H	Lt. 10th Inf	Fort Mackinac, Mich	July 1, 1882, to June 30, 1883.
Kendrick, F. M. H	Lt. 7th Inf	Fort Buford, Dak	July 1, 1882, to July 30, 1882.
Do	do	Fort Pembina, Dak	August 19, 1882, to December 10, 1882.
Kerr, James T	Lt. 17th Inf	Fort Stevenson, Dak	November 8, 1882, to December 31, 1882.
Kernan, Francis J	Lt. 21st Inf	Fort Klamath, Oreg	March 1, 1883, to April 14, 1883.
Kennon, L. W. V	Lt. 6th Inf	Fort Thornburg, Utah	October 18, 1882, to March 31, 1883.
Kinzie, George H	Lt. 15th Inf	Fort Lewis, Colo	July 1, 1882, to October 31, 1882.
Kingsbury, Fred'k W	Lt. 2d Cav	Fort Maginnis, Mont	May 1, 1883, to June 30, 1883.
Knower, Edward C	Lt. 3d Art	Jackson Barracks, La	July 1, 1882, to May 31, 1883.
Knox Thomas T	Lt. 1st Cav	Fort McDermit, Nev	July 1, 1882, to September 30, 1882.
Kobbe, William A	Lt. 3d Art	Mount Vernon Barracks, Ala.	July 1, 1882, to December 31, 1882.
Landis, J. F. R	Lt. 1st Cav	Fort Lapwai, Idaho	July 1, 1882, to November 30, 1882.
Leggett, Henry F	Lt. 24th Inf	Fort Sill, Ind. Ter	July 1, 1882, to April 17, 1883.
Luff, Edmund	Capt. 8th Cav	Fort Clark, Tex	July 1, 1882, to April 30, 1883.
Maxon, Mason M	Lt. 10th Cav	Fort Concho, Tex	July 1, 1882, to July 31, 1882.
Do	do	Fort Davis, Tex	November 1, 1882, to June 30, 1883.
Mansfield, Francis W	Lt. 11th Inf	Fort Buford, Dak	September 1, 1882, to May 31, 1883.
Maize, William R	Capt. 20th Inf	Fort Riley, Kans	August 1, 1882, to September 30, 1882.
Maney, James A	Lt. 15th Inf	Fort Lewis, Colo	November 1, 1882, to November 30, 1882.
Do	do	Fort Stevenson, Dak	January 1, 1883, to June 30, 1883
McCalef, Thomas S	Lt. 9th Inf	Fort McKinney, Wyo	August 1, 1882, to March 21, 1883.
McCarthy, Daniel E	Lt. 12th Inf	Plattsburg Barracks N. Y	September 25, 1882, to March 31, 1883.
Mills, Samuel M	Lt. 5th Art	Fort Columbus, New York Harbor.	July 1, 1882, to November 30, 1882.
Miller, Crosby P	Lt. 4th Art	Fort Preble, Me	July 1, 1882, to June 30, 1883.
Michaelis, Otho E	Capt. of Ord	Frankford Arsenal, Pa	July 1, 1882, to June 30, 1883.
Mitcham, Orin B	Lt. of Ord	Rock Island Arsenal, Ill	July 1, 1882, to June 30, 1883.
Miller, William H	Lt. 1st Cav	Fort Walla Walla, Wash	July 1, 1882, to October 31, 1882.
Do	do	do	April 1, 1883, to June 30, 1883.
Miller, Samuel W	Lt. 5th Inf	Camp Poplar River, Mont	July 1, 1882, to August 31, 1882.
Miner, Christopher C	Lt. 9th Inf	Fort Fred. Steele, Wyo	October 16, 1882, to February 28, 1883.

List of officers on duty as acting commissaries of subsistence, &c.—Continued.

Name of officer.	Rank and regiment.	Station.	Period of service.
Mills, Frank H	Lt. 24th Inf	Fort Elliott, Tex	July 1, 1882, to September 30, 1882.
Do	do	Fort Supply, Ind. Ter	November 1, 1882, to June 30, 1883.
Morrison, Charles C	Lt. of Ord	Springfield Armory, Mass.	July 1, 1882, to June 30, 1883.
Mott, Wallace	Lt. 8th Inf	Angel Island, Cal	July 1, 1882, to June 30, 1883.
Morgan, A. S. M	Capt. & O. S. K.	Allegheny Arsenal, Pa	July 1, 1882, to June 30, 1883.
Morgan, George H	Lt. 3d Cav	Fort Verde, Ariz	February 15, 1883, to June 30, 1883.
Myer Albert L	Lt. 11th Inf	Fort Bennett, Dak	October 18, 1882, to June 30, 1883.
Newton, John	Lt. 16th Inf	Fort McKavett, Tex	August 1, 1882, to October 31, 1882.
Do	do	San Antonio, Tex	December 1, 1882, to June 30, 1883.
Nickerson, James D	Lt. 17th Inf	Fort Totten, Dak	July 1, 1882, to October 10, 1882.
O'Brien, John J	Lt. 4th Inf	Cheyenne Depot, Wyo	July 1, 1822, to August 15, 1882.
Do	do	Fort D. A. Russell, Wyo	August 15, 1882, to September 30, 1882.
Osgood, Henry B	Lt. 3d Art	Little Rock Barracks, Ark.	November 1, 1882, to June 30, 1883.
Olmstead, Jerauld A	Lt. 9th Cav	Fort Riley, Kans	May 1, 1883, to June 30, 1883.
Parker, Mont. D	Lt. 9th Cav	Fort Riley, Kans	July 1, 1882, to July 31, 1882.
Patterson, Robert H	Lt. 1st Art	Fort Canby, Wash	July 1, 1882, to September 30, 1882.
Patterson, George T. T	Lt. 14th Inf	Camp on White River Colo.	July 1, 1882, to June 30, 1883.
Patten, Francis J	Lt. 21st Inf	Boise Barracks, Idaho	July 1, 1882, to January 31, 1883.
Patch, Alexander M	Lt. 4th Cav	Fort Bayard, N. Mex	January 1, 1883, to June 30, 1883.
Peshine, J. H. H	Lt. 13th Inf	Fort Selden, N. Mex	July 1, 1882, to October 11, 1882.
Do	do	Fort Cummings, N. Mex	November 1, 1882, to June 30, 1883.
Penney, Charles G	Capt. 6th Inf	Fort Douglas, Utah	July 1, 1882, to March 11, 1883.
Do	do	Fort Thornburg, Utah	April 1, 1883, to June 30, 1883.
Perrine, Henry P	Lt. 6th Cav	Fort Bowie, Ariz	September 1, 1882, to November 30, 1882.
Phelps, Frederick E	Lt. 8th Cav	Fort McIntosh, Tex	July 1, 1882, to March 31, 1883.
Phister, Nathaniel P	Lt. 1st Inf	Fort Mojave, Ariz	September 1, 1882, to June 30, 1883.
Phipps, Frank H	Major of Ord	Kennebec Arsenal, Me	April 16, 1883, to June 30, 1883.
Pitman, John	Capt. of Ord	Watertown Arsenal, Mass.	July 1, 1882, to June 30, 1883.
Pitcher, William L	Lt. 8th Inf	Benicia Barracks, Cal	July 1, 1882, to June 30, 1883.
Potts, Ramsey D	Lt. 3d Art	Little Rock Barracks, Ark.	July 1, 1882, to October 31, 1882.
Do	do	Mount Vernon Barracks, Ala	January 1, 1883, to June 30, 1883.
Powell, James W	Capt. 8th Inf	San Diego, Barracks, Cal	July 1, 1882, to June 30, 1883.
Porter, John M	Lt. 3d Cav	Fort Thomas, Ariz	September 1, 1882, to June 30, 1883.
Pratt, Sedgwick	Lt. 3d Art	Fort Monroe, Va	July 1, 1882, to June 30, 1883.
Price, George F	Capt. 5th Cav	174 Hudson, street, New York City.	February 1, 1883, to June 30, 1883.
Quinton, William	Lt. 7th Inf	Fort Fred. Steele, Wyo	March 1, 1883, to June 30, 1883.
Randolph Benjamin H	Lt. 3d Art	Jackson Barracks, La	June 1, 1883, to June 30, 1883.
Reed, Henry A	Lt. 2d Art	Fort McHenry, Md	July 1, 1882, to November 30, 1882.
Reynolds, Bainbridge	Lt. 3d Cav	Fort Thomas, Ariz	July 1, 1882, to July 14, 1882.
Do	do	Whipple Barracks, Ariz	September 1, 1882, to June 30, 1883.
Rexford, William H	Capt., O. S. K	Indianapolis Arsenal, Ind	July 1, 1882, to October 6, 1882.
Regan, James	Lt. 9th Inf	Fort Omaha, Nebr	July 1, 1882, to August 12, 1882.
Do	do	Fort D. A. Russell, Wyo	October 1, 1882, to June 30, 1883.
Reynolds, Alfred	Lt. 20th Inf	Fort Leavenworth, Kans	July 1, 1882, to June 30, 1883.
Reade, Harry	Lt. 25th Inf	Fort Meade, Dak	July 1, 1882, to July 6, 1882.
Do	do	do	August 1, 1882, to April 30, 1883.
Reilly, Henry J	Lt. 5th Art	Fort Hamilton, New York Harbor.	July 10, 1882, to November 30, 1882.
Do	do	Fort Columbus, New York Harbor.	November 30, 1882, to June 30, 1883.

List of officers on duty as acting commissaries of subsistence, &c.—Continued.

Name of officer.	Rank and regiment.	Station.	Period of service.
Rice, William F	Lt. 23d Inf	Fort Union, N. Mex	July 1, 1882, to June 30, 1883.
Richards, William V	Lt. 16th Inf	Fort McKavett, Tex	July 1, 1882, to July 31, 1882.
Do	do	Fort Concho, Tex	September 1, 1882, to February 28, 1883.
Ripley, Henry L	Lt. 24th Inf	Fort Sill, Ind. Ter	April 17, 1883, to June 30, 1883.
Roberts, Benjamin K	Lt. 5th Art	Fort Wadsworth, New York Harbor.	July 1, 1882, to September 30, 1882.
Rowan, Andrew S	Lt. 15th Inf	Pagosa Springs, Cal	July 1, 1882, to November 30, 1882.
Robinson, Daniel	Lt. 7th Inf	Cantonment Bad Lands, Dak.	July 1, 1882, to November 4, 1882.
Do	do	Fort Laramie, Wyo	April 1, 1883, to June 30, 1883.
Ross, John M	Lt. 21st Inf	Vancouver Barracks, Wash.	July 1, 1882, to February 28, 1883.
Russell, Albert J	Lt. 7th Cav	Fort Totten, Dak	April 16, 1883, to June 30, 1883.
Russell, Andrew H	Lt. of Ord	Benicia Arsenal, Cal	May 1, 1883, to June 30, 1883.
Sage, William H	Lt. 5th Inf	Cantonment Bad Lands, Dak.	November 4, 1882, to February 28, 1883.
Schuyler, Walter S	Lt. 5th Cav	Fort Sidney, Nebr	July 1, 1882, to August 31, 1882.
Scott, John	Lt. 4th Inf	Fort Omaha, Nebr	August 12, 1882, to January 31, 1883.
Scott, George L	Lt. 6th Cav	Fort Verde, Ariz	July 1, 1882, to August 31, 1882.
Do	do	Fort McDowell, Ariz	September 1, 1882, to June 30, 1883.
Seton, Henry	Lt. 4th Inf	David's Island, New York Harbor.	July 1, 1882, to August 31, 1882.
Sharp, Frederick Dent	Lt. 20th Inf	Fort Dodge, Kans	July 1, 1882, to November 15, 1882.
Shoemaker, Frank L	Capt. 4th Cav	Fort Stanton, N. Mex	July 1, 1882, to August 31, 1882.
Shaw, Richard O	Lt. 1st Art	Fort Stevens, Oreg	July 1, 1882, to July 31, 1882.
Do	do	Fort Canby, Wash	October 1, 1882, to October 23, 1882.
Shelby, Isaac O	Lt. 16th Inf	Fort Concho, Tex	March 1, 1883, to June 30, 1883.
Simpson, James F	Lt. 3d Cav	Fort D. A. Russell, Wyo	July 1, 1882, to August 15, 1882.
Sickel, H. G., jr	Lt. 7th Cav	Fort Sisseton, Dak	August 1, 1882, to October 31, 1882.
Smith, Sebree	Lt. 2d Art	Washington Barracks, D. C.	July 1, 1882, to June 30, 1883.
Smith, Charles, jr	Lt. 8th Inf	Fort Halleck, Nev	March 1, 1883, to June 30, 1883.
Spaulding, E. J	Capt. 2d Cav	174 Hudson street, New York City.	July 1, 1882, to October 20, 1882.
Stiles, Daniel F	Lt. 10th Inf	Fort Porter, N. Y	July 1, 1882, to June 30, 1883.
Stafford, John	Lt. 8th Inf	Fort Halleck, Nev	July 1, 1882, to July 31, 1882.
Strother, Lewis H	Lt. 1st Inf	Fort Lowell, Ariz	July 1, 1882, to December 31, 1882.
Stevens, Robert R	Lt. 6th Inf	Fort Cameron, Utah	July 1, 1882, to May 8, 1883.
Starr, Charles G	Lt. 1st Inf	Camp Price, Ariz	August 16, 1882, to October 27, 1882.
Do	do	Fort Bowie, Ariz	December 1, 1882, to May 14, 1883.
Stewart, William F	Lt. 4th Art	Fort Snelling, Minn	November 10, 1882, to December 31, 1882.
Steever, Edgar Z., jr	Lt. 3d Cav	Fort Huachuca, Ariz	April 1, 1883, to June 30, 1883.
Summerhayes, John W	Lt. 8th Inf	Fort Halleck, Nev	August 1, 1882, to February 28, 1883.
Swift, James A	Lt. Sig. Corps	Fort Myer, Va	July 1, 1882, to June 30, 1883.
Taylor, A. H. M	Lt. 19th Inf	Fort Ringgold, Tex	November 1, 1882, to June 30, 1883.
Terrett, Colville P	Lt. 8th Inf	Fort McDermit, Nev	October 1, 1882, to June 30, 1883.
Thompson, John T	Lt. 2d Art	Newport Barracks, Ky	October 1, 1882, to June 30, 1883.
Thompson, Richard E	Lt. 6th Inf	Fort Washakie, Wyo	October 1, 1882, to June 30, 1883.
Thurston, Walter A	Lt. 16th Inf	Fort McKavett, Tex	November 1, 1882, to June 30, 1883.
Thies, Frederick	Lt. 3d Inf	Fort Shaw, Mont	December 1, 1882, to May 31, 1883.
Thorp, Frank	Lt. 5th Art	Fort Hamilton, New York Harbor.	December 1, 1882, to June 30, 1883.
Totten, C. A. L	Lt. 4th Art	Madison Barracks, N. Y	July 1, 1882, to September 17, 1882.
Truitt, Charles M	Lt. 21st Inf	Fort Townsend, Wash	July 1, 1882, to April 18, 1883.

List of officers on duty as acting commissaries of subsistence, &c.—Continued.

Name of officer.	Rank and regiment.	Station.	Period of service.
Tyler, William W	Lt. 13th Inf	Fort Craig, N. Mex	July 1, 1882, to December 31, 1882.
Tyler, Charles R	Lt. 16th Inf	Fort Concho, Tex	August 1, 1882, to August 31, 1882.
Ulio, James	Lt. 2d Inf	Fort Spokane, Wash	July 1, 1882, to October 31, 1882.
Van Orsdale, J. T	Lt. 7th Inf	Fort Stevenson, Dak	July 1, 1882, to November 8, 1882.
Van Liew, Frederick T	Lt. 2d Inf	In the field, Wash	June 19, 1883, to June 30, 1883.
Vedder, Simon C	Lt. 19th Inf	Fort Brown, Tex	July 1, 1882, to November 30, 1882.
Viele, Charles D	Capt. 10th Cav	Pena Colorado, Tex	August 1, 1882, to November 30, 1882.
Waltz, Millard F	Lt. 12th Inf	Fort McDowell, Ariz	July 1, 1882, to August 31, 1882.
Waterman, John C	Lt. 7th Cav	Fort Totten, Dak	October 10, 1882, to April 16, 1883.
Wainwright, R. P. P	Lt. 1st Cav	In the field, Wash	May 1, 1883, to June 30, 1883.
Weeks, Harrison S	Lt. 8th Cav	Fort Clark, Wash	May 1, 1883, to June 30, 1883.
Webster, Isaac T	Lt. 1st Art	Fort Mason, Cal	October 1, 1882, to June 30 1883.
Wever, Benjamin S	Lt. 1st Inf	Fort Huachuca, Ariz	October 1, 1882, to March 31, 1883.
Webster, John McA	Lt. 22d Inf	Fort Lyon, Colo	December 1, 1882, to June 30, 1883.
Whistler, Garland N	Lt. 5th Art	Fort Niagara, N. Y	July 1, 1882, to September 18, 1882.
Do	do	Fort Wadsworth, New York Harbor.	June 1, 1883, to June 30, 1883.
White, John V	Lt. 1st Art	Fort Winfield Scott, Cal	July 1, 1882, to June 30, 1883.
Wheeler, Fred	Lt. 4th Cav	In the field near Richmond, N. Mex.	April 1, 1883, to June 30, 1883.
Wheeler, Daniel D	Capt. A. Q. M	Saint Paul, Minn	April 1, 1883, to June 30, 1883.
Wilson, James L	Lt. 4th Art	Fort Trumbull, Conn	July 1, 1882, to June 30, 1883.
Wills, John H	Lt. 22d Inf	Fort Duncan, Tex	July 1, 1882, to November 9, 1882.
Wilson, R. H	Lt. 8th Inf	Fort Gaston, Cal	July 1, 1882, to June 30, 1883.
Wittich, Willis	Lt. 21st Inf	Fort Canby, Wash	October 23, 1882, to May 31, 1883.
Williams, Richard A	Lt. 8th Cav	Fort Duncan, Tex	November 9, 1882, to April 18, 1883.
Williams, William M	Lt. 19th Inf	Fort McIntosh, Tex	April 1, 1883, to June 30, 1883.
Wolf, Silas A	Lt. 4th Inf	Fort Bridger, Wyo	July 1, 1882, to December 31, 1882.
Wood, Palmer G	Lt. 12th Inf	Fort Mojave, Ariz	July 1, 1882, to August 31, 1882.
Do	do	Fort Niagara, N. Y	September 18, 1882, to June 30, 1883.
Wotherspoon, W. W	Lt. 12th Inf	Whipple Barracks, Ariz	July 1, 1882, to August 31, 1882.
Do	do	Madison Barracks, N. Y.	September 17, 1882, to June 30, 1883.
Woodward, Samuel L	Lt. 10th Cav	Fort Davis, Tex	July 1, 1882, to October 31, 1882.
Yeatman, Richard T	Lt. 14th Inf	Campon Snake River, Wyo.	October 1, 1882, to June 30, 1883.
Young, Daniel J	Capt. O. S. K	Watervleit Arsenal, N. Y.	July 1, 1882, to June 30, 1883.
Zalinskie, Edmund L	Lt. 5th Art	Fort Wadsworth, New York Harbor.	October 1, 1882, to May 31, 1883.

REPORT OF THE SURGEON-GENERAL.

REPORT

OF

THE SURGEON-GENERAL.

WAR DEPARTMENT,
SURGEON-GENERAL'S OFFICE,
Washington, October 1, 1883.

SIR: I have the honor to submit the following statement of finances and general transactions of the Medical Department of the Army for the fiscal year ending June 30, 1883:

FINANCIAL STATEMENT.

Medical and Hospital Department, 1879, and prior years:		
Appropriated by act of August 5, 1882, Statutes 22,277		$1,205 96
Disbursed during the year		1,205 96
Medical and Hospital Department 1880, and prior years:		
Appropriated by act of March 3, 1883, Statutes 22,597		477 20
Disbursed during the year		477 20
Medical and Hospital Department, 1881:		
Balance from previous fiscal year		652 59
Refunded during the year		6 03
		658 62
Disbursed during the year	$229 35	
Carried to the surplus fund	429 27	
		658 62
Medical and Hospital Department, 1882:		
Balance from previous fiscal year		32,009 38
Refunded for supplies lost, sold, &c		343 07
Total to be accounted for		32,352 42
Disbursed during the year		32,227 76
Balance June 30, 1883		124 69
Medical and Hospital Department, 1883:		
Appropriated by act of June 30, 1882		200,000 00
Received for supplies sold		3,298 48
Total to be accounted for		203,298 48
Disbursed during the year		158,477 09
Balance June 30, 1883		44,821 39

The entire balance remaining at the end of the fiscal year was covered by previous contracts and obligations, and the greater part of the money has since been expended.

Artificial limbs, 1880, and prior years:		
Balance from previous fiscal year		$9,900 94
Transferred under act of March 3, 1875		297 64
Total to be accounted for		10,198 58
Disbursed during the year	$297 64	
Carried to the surplus fund	9,900 94	
		10,198 58
Artificial limbs, 1881:		
Balance from previous fiscal year		3,269 81
Disbursed during the year		1,056 59
Balance June 30, 1883		2,213 22
Artificial limbs, 1882:		
Balance from previous fiscal year		72,918 85
Disbursed during the year		8,868 06
Balance June 30, 1883		64,050 79
Artificial limbs, 1883:		
Appropriated by act of August 7, 1882		120,000 00
Disbursed during the year		93,669 94
Balance June 30, 1883		26,330 06
Appliances for disabled soldiers, 1881:		
Balance from previous fiscal year		2,369 00
Carried to the surplus fund		2,369 00
Appliances for disabled soldiers, 1882:		
Balance from previous fiscal year		2,750 00
Disbursed during the year		106 00
Balance June 30, 1883		2,644 00
Appliances for disabled soldiers, 1883:		
Appropriated by act of August 7, 1882		2,000 00
Disbursed during the year		221 25
Balance June 30, 1883		1,778 75
Medical and Surgical History:		
Balance from previous fiscal year		9,100 15
Disbursed during the year		565 50
Balance June 30, 1883		8,534 65
Museum and Library, 1882:		
Balance from previous fiscal year		1,284 22
Disbursed during the year		1,284 22
Museum and Library, 1883:		
Appropriated by act of June 30, 1882		10,000 00
Disbursed during the year		7,905 45
Balance June 30, 1883		2,094 55
Expended in furnishing trusses under acts of May 28, 1872, and March 3, 1879		2,098 12

There were furnished during the fiscal year:

In kind:	
Trusses	503
Artificial legs	51
Artificial feet	1
Apparatus for the leg	7
Artificial arms	8
Artificial hands	
Apparatus for arms	
Commuted:	
Trusses	
Artificial legs	201
Artificial feet	30
Apparatus for the leg	371
Artificial arms	420
Artificial hands	16
Apparatus for arms	678

TRUSSES.

In carrying out the laws for furnishing trusses some cases of hardship are found. Persons who held commissions as officers and all persons who were disabled previous to the war for the suppression of the rebellion are absolutely, and those disabled subsequently to this war are practically, excluded from the benefits of these laws, although these persons are pensioned on account of hernia.

It is desirable that the issue of trusses shall correspond to the issue of artificial limbs, as was probably the intention of Congress; that is, that a truss shall be furnished to every one who is ruptured in the line of his duty while serving in the Army or Navy.

MEDICAL AND HOSPITAL SUPPLIES.

The cost of the medical and hospital supplies actually issued during the last fiscal year was $180,139.73.

The cost of the supplies which will be required for issue during the current fiscal year will probably exceed that amount, and I therefore respectfully urge that the necessity for an adequate appropriation to meet the actual expenses of the Medical Department for the fiscal year ending June 30, 1885, be brought to the attention of Congress. I am of the opinion that an appropriation of $250,000 will be required for the purposes set forth in an estimate submitted to you on the 24th of August last, and for the reasons briefly specified in a note thereto.

The act making appropriations for the support of the Army for the fiscal year ending June 30, 1884, approved March 3, 1883, provides:

> That civilian employés of the Army stationed at military posts may, under regulations to be made by the Secretary of War, purchase necessary medical supplies, prescribed by a medical officer of the Army, at cost, with 10 per centum added.

Proceeds of sales under this act must, under section 3618 of the Revised Statutes, be covered into the Treasury. It is very desirable that the proceeds of sales of medical supplies to civilian employés should, if possible, be carried to the current appropriation for the Medical Department of the Army, and the amount become available for replacing the articles sold.

This may have been the intention of the framers of this act, and such Congressional legislation is requested as will permit this course to be taken, and which may be accomplished by excepting "sales of medical supplies to civilian employés of the Army," from the provisions of sec-

tion 3618 of the Revised Statutes, as is the case with "the sale of commissary stores to the officers and enlisted men of the Army."

HEALTH OF THE ARMY DURING THE FISCAL YEAR ENDING JUNE 30, 1883.

The monthly reports of sick and wounded received at this office represent for the year an average mean strength of 20,914 white, 2,390 colored troops, and 208 Indian scouts.

Among the *white troops* the total number of cases of all kinds taken on the sick list was 37,697, being at the rate of 1,802 per 1,000 of mean strength; an increase of 123 cases per 1,000 over the number reported for the previous year, and 68 per 1,000 over the average decennial rate of admissions.

Of this number, 32,833, or 1,570 per 1,000 of mean strength, were taken on sick report for disease, and 4,864, or 232 per 1,000 of mean strength, for wounds, injuries, and accidents; making the rate per 1,000 of mean strength for the latter somewhat greater than reported for the preceding year, but for the preceding decade 17 per 1,000 less.

The average number constantly on sick report during the year was 993, or 47 per 1,000 of mean strength; an increase of 2 per 1,000 over the previous year, and 3 per 1,000 over the average decennial rate.

Of these, 794, or 38 per 1,000 of strength, were constantly under treatment for disease, and 199, or 9 per 1,000 of strength, for wounds, accidents, and injuries.

The total number of deaths from all causes reported among the white troops was 214, or 10 per 1,000 of mean strength; a rate equal to that reported for the previous year and a decrease of 2.7 per 1,000 below the average of the preceding decade.

Of these, 146, or 7 per 1,000 of mean strength, died of disease, and 68, or 3 per 1,000 of mean strength, of wounds, injuries, and accidents.

The proportion of deaths from all causes to cases treated was 1 to 176; an increase of 15 over the previous year, and 34 over the average of deaths to cases treated during ten years.

The total number of white soldiers reported to have been discharged the service for disability was 879, or 42 per 1,000 of mean strength; an increase of 1 per 1,000 over the number last reported, and 10 per 1,000 over the average of discharges for the decade.

Of these, 785, or 38 per 1,000 of strength, were discharged for disease, and 94, or 4 per 1,000, for the results of wounds and injuries.

Among the *colored troops* the total number of cases of all kinds reported was 4,689, or 1,962 per 1,000 of mean strength; an increase of 152 per 1,000 over the rate reported for the previous year, and 126 per 1,000 over that for the decade preceding.

Of these, 3,872, or 1,620 per 1,000 of strength, were cases of disease, and 817, or 342 per 1,000 of strength, were for wounds, injuries, and accidents; a rate 110 per 1,000 greater than that occurring among the white troops for the same period, and 92 per 1,000 greater than the average rate of wounds and injuries for ten years preceding.

The average number constantly on sick report was 97, or 41 per 1,000 of mean strength; of whom 71, or 30 per 1,000, were under treatment for disease, and 26, or 11 per 1,000, for wounds, injuries, and accidents; a decrease in the average decennial rate of diseases and injuries combined of over 4 cases per 1,000.

The total number of deaths of colored soldiers reported from all causes was 26, or 11 per 1,000 of mean strength.

Of these, 15, or 6 per 1,000, died of disease, and 11, or 5 per 1,000, of wounds, injuries, and accidents; a consolidated death rate the same as reported for the last year, and 5 per 1,000 less than the decennial average. The proportion of deaths from all causes to cases treated was 1 to 180; an increase of 16 over the rate last reported, and 63 over the average decennial rate.

The total number of colored soldiers reported to have been discharged for disability was 101, or 42 per 1,000 of mean strength; a decrease of 1 per 1,000 from the rate last reported, and an increase of 14 per 1,000 over the decennial rate.

Of these 86, or 36 per 1,000, were discharged for disease, and 15, or 6 per 1,000, for the results of wounds and injuries.

The total number of cases reported among the Indian scouts was 44, being at the rate of 212 per 1,000 of mean strength, a decrease of 17 per 1,000 from that of last report. Of these 33 were cases of disease and 11 of wounds, injuries, and accidents.

The total number of deaths was 2, 1 from disease and 1 from wounds.

The admissions to sick report during the year are shown in tabular form on Appendix A, with ratios calculated upon the mean strength of the two classes of troops respectively, and also for the combined forces as reported upon the returns made to this office.

Diseases of the respiratory organs stand first in numerical importance, of which about 64 per cent. are catarrhs of the upper air passages. Extremes of variation in temperature will account in part for the frequency of these diseases, but to a larger extent insufficient ventilation of barracks and dormitories, as well as irregular and unequal distribution of artificial heat during cold weather, must be held responsible.

Wounds, injuries, and accidents stand second on the list of causes impairing the effectiveness of the Army. The large number recorded in this class may probably be attributed to the use of troops in mechanical and laborious employments which form so large a proportion of the soldier's duties. As an indication of the peculiar hardships to which our troops are exposed, the rates of admission for wounds, accidents, and injuries are 122 per 1,000 higher than those reported for the German army, and 142 per 1,000 higher than the decennial rate of the British army.

The rate for syphilis and venereal diseases is much lower than might have been anticipated, comparing favorably with the reports of foreign armies in this respect. The vicennial rate for the British army serving in the United Kingdom for venereal diseases of all descriptions is 107 per 1,000, and for constitutional or secondary syphilis 12 per 1,000 of mean strength higher than for United States troops, and the showing becomes still more favorable when the fact is considered that medical officers of the British service report only such cases as are admitted to hospital for treatment. In the German army the rate of admission for the years 1879 and 1880 was 25 per 1,000 of mean strength lower than our rate for venereal disease, and 9 per 1,000 higher for constitutional syphilis.

It is interesting to note that the colored troops make a particularly favorable showing in the small number of admissions for alcoholism and its results, exhibiting as they do a rate of only 4 per 1,000 to a rate of 76 per 1,000 of mean strength among the whites. On the other hand, in diseases of the nervous system, they have an unexplained preponderance.

Four cases of small-pox are reported during the year, a number that

though small in itself must appear to be unnecessarily large when the returns for the German army are considered, where 2 cases only are reported as having occurred from 1879 to 1881, and this small number in a mean aggregate force of over 327,000 officers and men, all of whom are stationed in thickly populated communities and subjected at all times to greater exposure from small-pox than our own troops. The thorough revaccination of every individual of the military establishment, which has proven to be so eminently protective in the German army, should be rigidly enforced in our own.

Reference to Appendix B shows the febrile group of diseases to have been the most prominent cause of death, furnishing 37, or 1.6 deaths per 1,000 of the mean strength of the Army. The respiratory group, in which consumption has been included, contributes 32 deaths, and a rate that is but a trifle lower than the febrile group. Diseases of the circulatory system stand third, furnishing 27 deaths and a rate of 1.2 per 1,000 of mean strength. In the last important group are included all diseases of the digestive system and the organs of assimilation. These have furnished a total of 24 deaths, and a rate of 1 per 1,000 to the mean strength of the Army.

The principal causes of discharge on "surgeon's certificate of disability" as reported during the year can be briefly noted in the order of numerical importance as follows:

Of diseases of the brain and nervous system, including insanity, there were reported 156 cases, or over 6 per 1,000 of the mean strength of the Army. Diseases of the respiratory group, including consumption, contributed 97 cases, and diseases of the digestive and assimilative organs 98 cases, or for each group 4 per 1,000; the circulatory system 90 cases, or 3.9 per 1,000. Constitutional syphilis and chronic rheumatism each 89 cases, or 3.8 per 1,000. Diseases of the organs of special sense, 76 cases, or 3.3 per 1,000; and genito-urinary diseases, non-venereal, 61 cases, or 2.6 per 1,000 of the mean strength of the Army.

YELLOW FEVER AT FORT BROWN, TEXAS.

I have to report that a limited and exceptionally mild epidemic of yellow fever occurred among the troops stationed at Fort Brown, Tex., during the months of August, September, October, and November, 1882.

The first case reported in the garrison was that of Private William Busching, band, Nineteenth Infantry, who appears to have contracted the disease in the adjoining town of Matamoras, Mexico, where it then prevailed. He was admitted to hospital on the 1st of August, and died on the 4th, with black vomit and oozing of blood from the soles of his feet. During the month 4 other cases occurred among the troops, but no deaths. In September 20 cases occurred, with 1 death; in October 9 cases and 1 death; in November 2 cases and no deaths; making a total, as reported on nominal lists furnished to this office, of 36 cases and 3 deaths. At this time Fort Brown was garrisoned by the headquarters, regimental staff, band, and six companies of the Nineteenth United States Infantry, and one company of the Eighth Cavalry. The mean strength of command during the four months mentioned is reported as 20 officers, 294 enlisted men, or a total of 314; so that the whole number of cases of fever was but 115 per 1,000 of mean strength, and 120 per 1,000 of all cases of sickness reported, while the death rate was but little more than 8 per cent. of the number attacked. Among the families of officers and soldiers, together with the civilian employés

of the post, 32 were attacked and 3 died, or 160 per 1,000 of persons so exposed, and a death rate of 9 per cent. of cases treated.

The commissioned officers who are reported to have suffered were Capt. Charles T. Witherell, Nineteenth Infantry, Capt. William J. Lyster and First Lieut. Thomas M. Wenie, of the same regiment, and Assist. Surg. W. C. Gorgas, United States Army; Hospital Steward S. W. Reynolds, United States Army, also contracted the disease. Of these, all recovered save Lieutenant Wenie, who died on the fifth day after his seizure.

Measures for preventing the spread of the disease appear to have been promptly enforced; isolation of the sick and a thorough police and disinfection of the post was tried but unfortunately without success. Abandonment of the infected locality on the twenty-third day of the epidemic was followed by better results, as only 3 cases are reported in the camp which was pitched a few miles from the fort; and as these occurred within three days after the move the men may be considered to have been infected before their departure. The removal of a portion of the command from the northern to the southern part of the garrison appears to have materially checked the progress of the disease, and a subsequent move of the same troops on the forty-third day of the epidemic to camp, from which, as in the former instance, only 3 new cases were sent back to the fort, practically brought it to a close.

RECRUITING OF THE ARMY.

The number of recruits reported to have been examined by Army medical officers and private physicians during the year is 5,964 white, 426 black, and 247 Indian scouts. The total number of rejections was, for white, 2,063, or 346 per 1,000 of the number examined; and for black, 131, or 307 per 1,000; Indian scouts, none.

Primary inspections were made at military posts and at various recruiting rendezvous, and of such examinations 1,944 white and 126 colored were rejected. On secondary examination at recruiting depots, 120 white and 5 colored were found disqualified.

Appendix C exhibits in tabular form the number of rejections and causes therefor, together with the rate per thousand for each disease and group reported.

WORK PERFORMED IN THE RECORD AND PENSION DIVISION.

The total number of official demands upon this division during the fiscal year for information as to the cause of death in the case of deceased soldiers and the hospital record of invalids, was 119,580, being 57,950 in excess of similar applications during the previous year, and an increase of 89,576 cases over the yearly average of demands for the decade preceding. In addition to this large number there remained unanswered on the 30th of June, 1882, 21,959 applications, making in all 141,539 cases to be disposed of within as short a period of time as practicable.

Of the new cases 117,159 were from the Commissioner of Pensions, 1,878 from the Adjutant-General of the Army, and 543 from miscellaneous sources.

In anticipation of the great number of cases in which reports from hospital records would be required by the Commissioner of Pensions during the fiscal year ending June 30, 1883, Congress, by act approved August 5, 1882, increased the clerical force of this office and directed

that not less than three hundred clerks "be exclusively engaged in preparing and making reports to expedite the settlement of pension applications called for by the Commissioner of Pensions." The number of clerks on duty in the record and pension division is now somewhat in excess of the number required to be engaged upon pension work, and at no time since all the vacancies under the act of August 5, 1882, have been filled has the number been less than that specified in the act, viz, three hundred.

As the result of the labors of the increased force I have to report that during the year replies have been furnished to the proper authorities in 109,007 cases. Of these, 106,798 were to the Commissioner of Pensions, 1,680 to the Adjutant-General of the Army, and 529 to miscellaneous applicants; leaving 32,532 searches and replies yet to be made. In addition to the number of reports above stated as furnished the Commissioner of Pensions 1,343 have been prepared and furnished the same officer by the administrative and miscellaneous branch of the office, making a total of 108,141 reports in pension cases furnished during the year.

It will perhaps be of interest to exhibit, in brief, the work of the record and pension division during ten years preceding, and, by means of the subjoined table, establish a basis for comparison of the results of that decade and the year now reported.

Fiscal year ending—	No. of cases received.	No. of cases returned.	Average No. of clerks employed during the year.
June 30, 1873	16,601	19,875	99
June 30, 1874	17,957	18,535	96
June 30, 1875	20,332	15,542	64
June 30, 1876	25,406	18,252	68
June 30, 1877	20,428	14,650	53
June 30, 1878	21,074	22,927	67
June 30, 1879	22,339	35,183	96
June 30, 1880	39,241	36,277	115
June 30, 1881	55,040	40,596	151
June 30, 1882	61,630	61,079	176
Totals for the ten years	300,048	282,916	985
Annual average	30,004	28,291	98.5
Fiscal year ending June 30, 1883	119,580	109,007	*290

*These figures show the average for the fiscal year—July 1, 1882, to June 30, 1883. This office did not secure its full complement of clerks until March, 1883, and no appointments were made under the act of August 5, 1882, until the latter part of August, 1882.

From these figures it appears that, while the annual average number of cases returned per clerk employed in the division during the ten years noted was 287.22, the average number of cases returned per clerk during the fiscal year ending June 30, 1883, was 375.88, a gratifying increase of 30 per cent. above the average number of cases returned per clerk during the previous decade, and a daily average of work nearly equal to that of the fiscal year ending June 30, 1879, when the highest average per clerk in the history of the division was reached.

It is believed that this increase of efficiency is permanent, and that the coming year will show not only a larger aggregate of searches and reports, but also progressive improvement in the thoroughness of the work performed, and, in consideration of these facts, I think it may be safely estimated that, should the demands upon this division not exceed the average monthly receipts of the latter part of the fiscal year,

the accumulated surplus of cases now on hand will be disposed of within the period contemplated by the framers of the act of August 5, 1882. With reference to this it is proper to further state that a full and economical employment of the present large force necessitates a constant working margin of fully 10,000 cases, and when the number remaining on hand shall fall below that figure, a proportionate reduction will be made of the number of searchers, and the clerks so relieved transferred to the work of copying worn and mutilated records.

In my last report I mentioned the pressing necessity for the detail of as many men as could be spared upon this important work; and immediately upon the increase of the clerical force 17 were assigned to that duty.

The following is a summary of their work for the ten months during which they have been so employed: 15,442 folios have been transcribed, containing altogether 545,523 separate entries, each entry consisting of a soldier's name, his military description, the disease or injury for which he was treated, and in surgical cases a brief description of operations performed; also, the dates of admission and disposition of the patient, and accompanying remarks. In addition to these special entries, there have been copied a large number of prescription records, the greater part of which were written with lead pencil, and are now so illegible as to be decipherable by experts alone.

In the surgical division copyists have also been employed in transcribing and arranging, alphabetically, entries from a large number of casualty lists that, in the hands of the searchers of this division, are fast going to destruction.

There are now on hand (June 30, 1883), in addition to those already reported as transcribed, 20,605 folios, containing 740,072 entries, that should be immediately copied, and this work, in addition to the large number of folios that are constantly accumulating, will furnish employment for 50 copyists during the next two years, or for a larger number during a less period of time.

On the third of November, 1882, a circular was addressed to the medical directors of the several military departments, requiring all completed registers of sick and wounded, then on file at posts and arsenals, to be forwarded to this office for examination and permanent deposit. From these posts, and from medical officers of volunteers who still had in their possession registers of their several regiments and hospitals, 623 volumes have been received, making the total number now on file in this office 18,845 volumes.

In the subdivision of current reports 2,352 monthly reports of sick and wounded from 336 stations and moving commands were received and filed, together with 967 reports of examinations of recruits, and 737 reports of meteorological observations; 240 deaths were recorded as having occurred among United States troops and 980 discharges for disability.

In addition to these, 160 special reports of interesting medical cases that have occurred during the year, and 152 reports showing the sanitary condition of the several military posts and arsenals, were also received.

Upon the increase of the clerical force of the office, additional office-room became necessary for the accommodation of the record and pension division, since all the available space in the building on Tenth street was occupied and already overcrowded, and to provide for this necessity the Secretary of War authorized the leasing of buildings Nos. 935, 937, and 939 F street, and they were accordingly secured. The re-

cords were then divided, those pertaining to the Atlantic and Gulf States and the Territories being retained in the record room of the Medical Museum to form Section A, while those pertaining to other States were transferred to the new quarters to form Section B.

As has been stated in my former reports, great apprehension is at all times entertained as to the safety of these invaluable documents, the loss of which would add countless difficulties to the adjustment of the large number of claims still pending against the Government. Not only has every precaution been taken to control a fire within the buildings mentioned, but means have also been devised for the rescue of the more important volumes. In Section B nearly 6,000 hospital registers and death and discharge registers have been placed on the ground floor and in truck cases, which are so arranged that in the event of danger they can be run out of the building into the street; in Section A (which is located in the building on Tenth street) a similar plan has been adopted for the rescue of 3,000 additional registers. It is believed that if sufficient warning can be given the greater part of such records as are indispensable to the pension work of this office will probably be saved.

DIVISION OF SURGICAL RECORDS.

The number of wounds, accidents, and injuries recorded in Class V during the fiscal year ending June 30, 1883, was 5,692 in a mean strength of the Army of 23,512. Eighty deaths from wounds received in action or from other violent causes were reported; a proportion of 3.4 per 1,000 of the mean strength.

Two thousand three hundred and four surgical reports were received from medical officers in charge of post hospitals or detachments of the Army in the field or expeditions against hostile Indians; 1,612 were reports of sick and wounded and of operations; 60 were special reports of interesting cases; 476 were reports of a miscellaneous nature; 2 were lists of casualties, and 154 were histories of specimens contributed to the Army Medical Museum.

The casualties from actual warfare during the last fiscal year were few, only two reports of this nature having been received: (1.) On the 17th of July, 1882, a fight occurred at Chevallon's Fork, Arizona, about 50 miles from Fort Verde, between hostile Apaches and detachments of the Third and Sixth Cavalry, accompanied by Indian scouts. One of the latter was instantly killed and a private of the Sixth Cavalry died six hours after the engagement from a wound of the shoulder. Besides these, 5 men of the Sixth Cavalry and 2 of the Third Cavalry and 1 Indian scout were wounded. The casualties were reported by Acting Assist. Surg. C. H. Allen and C. B. Ewing. (2.) Capt. and Assist. Surg. J. C. Merrill reports that in a skirmish near Fort Custer, Mont., on November 8, 1882, an Indian scout received a severe shot wound of the left thigh.

Of the 5,692 wounds and injuries reported during the year, 239 were injuries of the head, 596 of the face, 26 of the neck, 480 of the trunk, 1,371 of the upper extremities, 1,198 of the lower extremities, 1,526 sprains, 54 dislocations, 115 simple fractures and 87 injuries of a miscellaneous character, including cases of poisoning, homicide, suicide, and drowning.

One hundred and twenty-one operations were performed; 42 were amputations, 2 excisions, and 77 miscellaneous operations. Of the 42 amputations, 3 were amputations in the humerus, 3 of the hand, 25 of the fingers, 2 of the thigh, 2 of the leg, 1 of the foot, and 6 of the toes.

The miscellaneous operations consisted of removals of fragments of bone, of missiles and other foreign substances, reductions of fractures and dislocations, removals of tumors and operations for strictures, phymosis, varicocele, hydrocele, hæmorrhoids, &c.

A large portion of the clerical force of this division has been employed during the last year in making an index of the cases of wounds and injuries reported on the casualty lists prepared during the war by the chief medical officers of commands in the field. These lists cover almost every engagement during the entire war, containing over 250,000 names, and are referred to in every case of application for pension alleging disability in consequence of wound. These slips, arranged alphabetically according to States, form a temporary index. This part of the work has been completed, the duplicated names have been consolidated, and the slips assorted and filed for ready reference. They contain, as nearly as can be ascertained, 80 per cent. of the wounds received in the various battles during the war. By means of this temporary index information has been furnished in 9,082 cases of application for pension.

The index largely saves the use of the manuscripts and also the time of the searcher; thus where it was only possible to search about 12 cases a day between 50 and 60 can now be searched.

Registers, arranged alphabetically according to States, have been provided for permanent indices, and 46,000 names have so far been entered thereon from the slips. The slips are not destroyed, but after the entries in the permanent registers have been made are rearranged according to regiments, thus making a second index. By the use of the latter, cases in which the name is misspelled and which would thus escape the searcher of the alphabetical State register are constantly being identified among the slips arranged according to regimental organizations.

As a matter of statistical interest it may here be stated that the 199,201 cases thus recorded are distributed among the States as follows:

New York	37,599
Pennsylvania	26,528
Ohio	23,810
Illinois	17,180
Indiana	15,523
Massachusetts	9,081
Michigan	7,096
Iowa	6,109
Maine	6,402
Wisconsin	5,913
Kentucky	5,553
New Jersey	5,120
Missouri	3,942
New Hampshire	4,170
Connecticut	3,841
Vermont	3,114
West Virginia	2,364
Maryland	1,301
Minnesota	1,099
Rhode Island	813
Delaware	823
Tennessee	695
Kansas	483
District of Columbia	116
Regulars	5,581
Colored troops	3,902
Troops not designated	1,043

Surgical History of the War.—The third surgical volume, which, at the close of the fiscal year ending June 30, 1882, had been advanced to

page 702, has been completed. It presents a volume containing 986 quarto pages, devoted to matters relating to the surgery of the lower extremities, to materia chirurgica, to transportation of wounded by land and water, to the work performed during the war by the medical staff, and the ambulance system, and 38 pages of indices, including a subject-matter index of all the three surgical volumes, making a total of 1,024 pages of printed matter, of which 322 were prepared during the last fiscal year. The volume was completed in time to be laid before the second session of the Forty-seventh Congress in February last.

ARMY MEDICAL MUSEUM.

Six hundred and thirty-eight specimens were added during the last fiscal year to the collection of the Army Medical Museum; 94 of these were purchased and 544 were contributions either by medical officers of the Army or by civil practitioners, and other citizens.

The additions to the collection are distributed in the various sections of the Museum as follows:

Surgical section.

Specimens in Museum, July 1, 1882	7,130
Specimens in Museum, July 1, 1883	7,265
Increase during the year	135

Medical section.

Specimens in Museum, July 1, 1882	1,615
Specimens in Museum, July 1, 1883	1,705
Increase during the year	90

Microscopical section.

Specimens in Museum, July 1, 1882	8,490
Specimens in Museum, July 1, 1883	8,881
Increase during the year	391

Anatomical section.

Specimens in Museum, July 1, 1882	2,138
Specimens in Museum, July 1, 1883	2,143
Increase during the year	5

Section of comparative anatomy.

Specimens in Museum, July 1, 1882	2,467
Specimens in Museum, July 1, 1883	2,481
Increase during the year	14

Miscellaneous section.

Specimens in Museum, July 1, 1882	724
Specimens in Museum, July 1, 1883	727
Increase during the year	3

The contributors to the collection were 9 surgeons, 20 assistant surgeons, 12 acting assistant surgeons, one hospital steward, and 49 citizens.

Thirteen thousand six hundred and fifty visitors registered at the Army Medical Museum during the year.

In 1866 a catalogue of the Army Medical Museum was prepared by this office and printed at the Government Printing-Office. The Museum collection at that time contained 4,719 specimens in the surgical section, 877 in the medical, and 2,120 in microscopical; a total of 7,716 specimens. Since then the number of surgical specimens has been increased to 7,265 of medical specimens to 1,705, and microscopical specimens to 8,881, and three new sections have been added to the collection, viz: An anatomical section, containing 2,143; a section of comparative anatomy, containing 2,481, and a miscellaneous section, containing 727 specimens; making a total of 2,120 specimens now in the Museum collection, of which less than one-third are described in the catalogue of 1866.

A manuscript catalogue is now in course of preparation, which will include a description of all specimens in the Museum at the present time. As such a catalogue is indispensable to the practical usefulness of so valuable a collection, it is hoped that authority may be granted by Congress for the printing and binding of this work at the Government Printing-Office.

LIBRARY.

The additions to the library during the past year include 3,912 volumes and about 5,000 pamphlets, making the total number in the collection about 60,900 volumes and 68,700 pamphlets.

The printing of volume 4 of the Index Catalogue has been completed and the edition distributed. This volume includes the letter E, and the letter F to "Fizes." The manuscript of Volume V, which will include the remainder of F and G and the greater part of H, is in an advanced stage of preparation, and the first part of it is now going to press.

An estimate has been forwarded for printing Volume VI of this catalogue, and it is hoped that the necessary appropriation will be promptly granted, as it is very desirable to push the work to completion with as little delay as possible.

The use of the library by the medical profession of the country continues to steadily increase. The amount of correspondence connected with this work may be inferred from the fact that over 2,000 letters were sent out during the year from this division of the office. Every effort is made to comply with the many requests for information, for books, &c., which are constantly coming in, but it is too often necessary to reply that the desired book or pamphlet is not in the library, even though it may be new and readily obtainable by purchase. The amount heretofore appropriated for the library is not sufficient to purchase all new books and journals, and therefore a selection must be made, which, of course, cannot meet the wants of every one. It is believed that this library has now become of such importance and utility, and is so widely consulted, that it should have the means of placing on its shelves as soon as published every new medical work, great or small, in all languages. To do this, and to supply books required to make its files complete in those subjects, with regard to which there is the greatest demand for information, will require an annual appropriation of $10,000, and estimates for this amount have been forwarded.

A NEW FIRE-PROOF BUILDING A NECESSITY FOR THE ARMY MEDICAL MUSEUM AND LIBRARY.

The ever-increasing necessity for a suitable fire-proof building for the accommodation of the Army Medical Museum and the library of the Surgeon General's Office must serve as an apology for again inviting especial attention to the subject.

The constant additions to these collections are not only dangerously overcrowding the building, but serve as embarrassments to the proper classification, care, and preservation of the same.

Notwithstanding the strict precautions taken to guard the Museum building from the danger of fire the greatest peril is ever present in the dangerous surroundings, which cannot be controlled.

It is respectfully urged that the attention of Congress may be especially called to the great importance to the Army, to the medical profession, and to the nation of providing a suitable fire-proof building for the safe deposit of these valuable collections, the destruction of which would be an irreparable loss.

PROVIDENCE HOSPITAL.

Under the act of Congress approved March 3, 1883, appropriating $15,000 for "the support and medical treatment of 75 transient paupers, medical and surgical patients," I have the honor to state that, by contract made with Providence Hospital, Washington, D. C., there have been granted during the fiscal year ending June 30, 1883, 558 permits for the admission to this institution of patients of this class, an average of 46.5 patients per month. In addition to this number it has been found possible, within the limits of said appropriation, to care for a monthly average of 84.75 patients of the same class, who are bed-ridden, infirm, and helpless, who have gradually accumulated in years past and who, but for the favorable terms of the contract, would be thrown upon the charity of the public.

MISCELLANEOUS.

The requirements of the Army as regards medical officers during the past year have been as follows:

Number of permanent posts	144
Number of temporary posts and substations	30
Total	174
Number of military expeditions in the field during the year	5

The services of 8 medical officers were required with these expeditions, and there were also 62 medical officers reported to this office as having been on duty with scouting parties and on other field service during the year.

An Army Medical Examining Board, consisting of Lieut. Col. Joseph B. Brown and Majors B. A. Clements and J. H. Janeway, surgeons United States Army, was convened in New York City on the 1st of March, 1883, for the examination of assistant surgeons for promotion, and of candidates for appointment in the Medical Corps of the Army.

The following is a recapitulation of the work done by the Board thus far during its session:

Number of assistant surgeons examined for promotion		10
Number of candidates for appointment in the Medical Corps invited to appear for examination		48
Number of candidates found qualified	13	
Number of candidates rejected	7	
Number of candidates who withdrew after partial examination	17	
Total number examined		37
Number of candidates who failed to appear for examination		3
Number of candidates who declined to appear for examination		3
Number invited but not yet examined		5

The names of the candidates found qualified will be reported to the Secretary of War in season for their appointments to be submitted to the Senate when Congress assembles in December next.

At the date of the last report of the Surgeon-General there was a vacancy in the office of Assistant Surgeon-General, and six vacancies in the grade of assistant surgeon. Since the date of that report Brig. and Bvt. Maj. Gen. Joseph K. Barnes, retired; one surgeon, with the rank of colonel; one surgeon, with the rank of major; three assistant surgeons, with the rank of captain; one assistant surgeon, with the rank of first lieutenant, and two assistant surgeons on the retired list have died. One assistant surgeon, with the rank of first lieutenant, has resigned. Col. Robert Murray, surgeon, was appointed (by transfer) Assistant Surgeon-General, with the rank of colonel, December 14, 1882. Two surgeons, with the rank of lieutenant-colonel, have been promoted to surgeon, with the rank of colonel; two surgeons, with the rank of major, have been promoted to surgeons, with the rank of lieutenant-colonel, and three assistant surgeons, with the rank of captain, have been promoted to surgeons, with the rank of major. Fourteen vacancies in the grade of assistant surgeon exist at this date (October 1, 1883) in the Medical Corps of the Army.

There are now nine medical officers on sick leave of absence; of these three have been found incapacitated for active service and recommended for retirement by Army Retiring Boards, viz: Assist. Surg. T. F. Azpell, who has been on sick leave since April 7, 1877; J. W. Buell, who has been on sick leave since August 23, 1877, and W. R. Steinmetz, who has been on sick leave since September 16, 1878. One has been recommended to be brought before an Army Retiring Board with a view to his retirement from active service, viz: Assist. Surg. J. V. DeHanne, who has been on sick leave since June 22, 1879; and three more are regarded as permanently disabled. Four medical officers are on ordinary leaves of absence after a tour of duty on the frontier, leaving 162 medical officers for duty October 1, 1883.

The medical officers who have died during the year are as follows:

Brig. and Bvt. Maj. Gen. Joseph K. Barnes, Surgeon-General (retired), at Washington, D. C., April 5, 1883.

Col. Charles C. Keeney, surgeon, at San Francisco, Cal., January 30, 1883.

Maj. George P. Jaquett, surgeon, at New York City, N. Y., October 6, 1882.

Capt. William H. King, assistant surgeon, at Philadelphia, Pa., August 23, 1883.

Capt. Holmes O. Paulding, assistant surgeon, at Fort Sidney, Nebr., May 1, 1883.

Capt. Bernard G. Semig, assistant surgeon, at San Francisco, Cal., August 1, 1883.

First Lieut. E. D. Schuè, assistant surgeon, at Fort Thomas, Ariz., October 1, 1882.

Capt. Joseph H. Bailey, assistant surgeon (retired), at Mount Carmel, N. Y., April 1, 1883.

Capt. Henry R. Silliman, assistant surgeon (retired), at Philadelphia, Pa., January 1, 1883.

Brig. and Bvt. Maj. Gen. Joseph K. Barnes, Surgeon-General, United States Army (retired), was appointed an assistant surgeon, United States Army, June 15, 1840. After a short term of duty of five months at the United States Military Academy, West Point, he was ordered, November 19, 1840, to Florida, then the field of active military opera-

tions against the Seminole and Creek Indians. During his service in Florida he was stationed at Forts Pleasant, Vose, Hamilton, Noel, Stansberry, Poinsett, and Brooke, and at Key West Barracks.

On October 15, 1843, he was assigned to duty at Fort Jesup, La., continuing on duty at that post until February 18, 1846, when he accompanied the Second Dragoons to Corpus Christi, Tex., to join the "Army of Occupation," then organizing on the Mexican frontier. He participated in all the movements and battles of the army invading Mexico, under the command of General Taylor, except that of Buena Vista. In March, 1847, he was transferred with General Worth's command to Vera Cruz, arriving there in time to be present at the siege and capitulation of that city (March 9–29, 1847). Accompanying General Scott's command as chief medical officer of the cavalry brigade, he was present and rendered distinguished service at the battles of Cerro Gordo, Contreras, Cherubusco, Molino del Rey, the storming of Chapultepec and the capture of the City of Mexico, September 14, 1847.

From February 16, 1848, to November 1, 1848, he was on duty at Baton Rouge, La., in charge of a general hospital, and at East Pascagoula, La. From the latter place he accompanied the Second United States Dragoons to Texas, reaching Austin, Tex., November 24, 1848. From this date until September 30, 1850, he served at Fort Croghan and other posts and in the field in Texas, when he reported under orders to the Surgeon-General at Washington, D. C., and was assigned to duty October 22, 1850, at Baltimore, Md., examining recruits and as post surgeon at Fort McHenry. On March 26, 1851, he was ordered to Fort Scott, Mo., where he served until July 5, 1852; he was then assigned to duty at Fort Leavenworth, Kans.

On May 2, 1853, he was ordered to accompany troops to the new post on the Kansas River, then called "Camp Centre" (now Fort Riley), where he remained on duty as post surgeon until October 20, 1853, when he proceeded to Philadelphia and reported by letter to the Surgeon-General, in which place he was examined for promotion December 16, 1853. On December 20, 1853, he was assigned to duty at the United States Military Academy, West Point, New York. On August 29, 1856, he received his promotion and appointment as major and surgeon. He was relieved from duty at West Point June 1, 1857, and ordered to the Department of the Pacific, and was assigned to duty in San Francisco, where he remained until September 12, 1857. On September 19, 1857, he entered upon his duties as post surgeon at Fort Vancouver, Wash., at the same time attending Fort Cascades.

From October 27, 1858, until July 5, 1860, he was on duty as medical director of the Department of Oregon until the merging of the departments of Oregon and California in the early part of January, 1861. He remained on duty at Fort Vancouver as post surgeon until June 20, 1861, when he proceeded to New York City and reported in person at the headquarters of the Army in compliance with orders from the War Department. On August 22, 1861, he was ordered to report for duty to Maj. Gen. David Hunter, whom he accompanied to Jefferson City, Mo., as medical director of his command; he served as medical director of the Western Department and Department of Kansas, also in the Department of the Mississippi, under General Halleck, until May 2, 1862, when he was ordered to report in person to the Surgeon-General, and was assigned to duty as attending surgeon to officers and their families in Washington, D. C.

On February 9, 1863, he was appointed lieutenant-colonel and medical inspector, and was assigned to duty in the Middle Department, with

station at Washington. He was appointed colonel and medical inspector-general August 10, 1863. On September 3, 1863, under the provisions of the act of July 4, 1836, he "was empowered to take charge of the Bureau of the Medical Department of the Army, and to perform the duties of the Surgeon-General during the absence of that officer," and on September 4, 1863, entered upon the duties of Acting Surgeon-General. On August 22, 1864, he was appointed Surgeon-General, with the rank of brigadier-general. On March 13, 1865, he was appointed major-general by brevet for faithful and meritorious services during the war. On June 30, 1882, after over forty-three years of continuous service, he was placed upon the retired list by operation of law.

Col. Charles C. Keeney, surgeon, entered the service as assistant surgeon July 12, 1842; disbanded September 23, 1842; reappointed March 19, 1845, and was promoted to surgeon, with the rank of major, June 23, 1860. Appointed medical inspector, with the rank of lieutenant-colonel, June 11, 1862, which rank he held until mustered out as such October 31, 1865. Breveted lieutenant-colonel for faithful and meritorious services during the war, to rank from March 13, 1865. Commissioned as surgeon, with the rank of lieutenant-colonel, June 26, 1876, and promoted to surgeon, with the rank of colonel, June 30, 1882.

From date of first appointment until disbanded, September 23, 1842, he was on duty at Fort Columbus, New York Harbor. Reappointed March 19, 1845, and on duty at Detroit, Mich., until June, 1845, and at Fort Wilkins, Mich., until June, 1846. With Army in Mexico from August, 1846, until June, 1848; at East Pascagoula, Miss., to September, 1848; on duty at New York City to November, 1848; at Fort Gratiot, Mich., to June, 1851; Fort Dodge, Iowa, to July, 1853; Fort Ridgeley, Minn., to October, 1853; Fort Columbus, New York Harbor, in December, 1853. Ordered to the Pacific coast and on duty at mission of San Diego, Cal., from March, 1854, to October, 1855; Fort Jones, Cal., to June, 1858; Forts Vancouver and Dalles, Oreg., to November, 1858, and at the Presidio, San Francisco, Cal., to June, 1861. Inspector of hospitals, Army of the Potomac, from November, 1861, to June, 1862; on duty in Department of the Mississippi, July and August, 1862; medical inspector, Department of the Missouri, from March to November, 1863, and medical inspector, Military Division of the Pacific, from January, 1864, to October, 1865. Attending surgeon and examiner of recruits, headquarters Department of California, from December, 1865, to November, 1866; medical director, Department of California, to April, 1867; attending surgeon and examiner of recruits, San Francisco, Cal., to February, 1876, and on duty at San Francisco, Cal., to the time of his death, January 30, 1883.

Maj. George P. Jaquett, surgeon, served as acting assistant surgeon at Washington, D. C., from September 6 until October 23, 1861, when he was appointed assistant surgeon; was promoted to surgeon, with the rank of major, May 14, 1880. Appointed captain and major by brevet for faithful and meritorious services during the war. From November, 1861, to August, 1862, on duty with Artillery Reserve, Army of the Potomac; with second battalion, Fourteenth Infantry, to April, 1863; and in hospital of the Second Division, Fifth Army Corps, Army of the Potomac, to September, 1863. On duty with the Fourth Infantry to December, 1863; examiner of recruits, New York City, to April, 1864; in charge of general hospital, Montpelier, Vt., to November, 1864; in charge of hospital transport Spaulding until July, 1865. Accompanied the Second Battalion, Fourteenth Infantry, from New

York City to Fort Vancouver, Wash., July, August, and September, 1865. On duty at Alcatraz Island and at San Francisco, Cal., to January, 1866; post surgeon, Fort Yuma, Cal., to August, 1867; Camp Wallen, Ariz., to December, 1868; Fort Boisé, Idaho, to April, 1869; Angel Island, Cal., to June, 1869; Omaha Barracks, Nebr., to July, 1869; post surgeon, Fort Niagara, N. Y., from January, 1870, to June, 1872; Fort Saunders, Wyo., to May, 1876. On duty with Major Brannan's command in South Carolina, Florida, and Georgia, from October, 1876, to January, 1877; at McPherson Barracks, Ga., until October, 1877; post surgeon, Fort Barrancas, Florida, to April, 1880; David's Island, New York Harbor, to April, 1882. On sick leave until his death, October 6, 1882.

Capt. William H. King, assistant surgeon, served as acting assistant surgeon at Mower general hospital, Chestnut Hill, Philadelphia, Pa., from March 3 to May 19, 1863, when his contract was annulled to enable him to accept the appointment of assistant surgeon of the One hundred and forty-ninth Pennsylvania Volunteers. He was on duty with that regiment, in the Third Division, First Army Corps, until mustered out of service July 30, 1863. August 5, 1863, he was mustered into service as surgeon of the Twenty-first Pennsylvania Cavalry Volunteers, and was on duty in the Army of the Potomac until August, 1864. On sick leave to October, 1864; with regiment in Army of the Potomac to July 8, 1865, when mustered out of service. He again served as acting assistant surgeon from November 16, 1867, to November 16, 1868, and was on duty at Cincinnati, Ohio, Fort Hays, Kans., and Fort Zara, Kans. Appoined assistant surgeon, United States Army, November 16, 1868, and continued on duty as post surgeon at Fort Zara, Kans., to October, 1869; post surgeon, Fort Wallace, Kans., to July, 1873; post surgeon, McPherson Barracks, Atlanta, Ga., and Yorkville, Newberry, and Greenville, S. C., to April, 1877; post surgeon, Fort Sully, Dak., to May, 1881. On sick leave, and awaiting orders, to October, 1881; post surgeon, Fort Trumbull, Conn., to December, 1881; on duty at Fort McHenry, Baltimore, Md., to April, 1882, when he availed himself of leave of absence on account of sickness, and remained on sick leave until time of his death, August 23, 1883.

Capt. Holmes Offley Paulding was appointed assistant surgeon United States Army, November 10, 1874. He was on duty at Fort Snelling, Minn., from December, 1874, to April, 1875; Fort A. Lincoln, Dak., to July, 1875; Fort Randall, Dak., to October, 1875; post surgeon at Fort Ellis, Mont., from October, 1875, to August, 1877; on field duty in Dakota to December, 1877; on duty at Fort A. Lincoln, Dak., to July, 1878; on field duty in Dakota and Nebraska, to December, 1878; post surgeon, Cheyenne Agency, Dak., to May, 1879; on duty at Fort McHenry, Md., to November, 1881; post surgeon, Fort Laramie, Wyo., to April, 1883, and post surgeon, Fort Sidney, Nebr., from the latter date to the time of his death, May 1, 1883.

Capt. Bernard G. Semig, assistant surgeon, entered the service as hospital steward, United States Army, May 20, 1863. Served at Camden street hospital, Baltimore, Md., and in medical director's office, Department of West Virginia, until honorably discharged June 27, 1864. July 1, 1864, he was appointed medical cadet, United States Army, and continued on duty as such, in the same office, until April 5, 1865, when discharged from the service. Appointed acting assistant surgeon, United States Army, October 1, 1868, and served as such at Camp Goodwin, Ariz., until February, 1869; at Camp Crittenden, Ariz., to April, 1871; Camp McDowell, Ariz., to July, 1872; awaiting orders at Prescott, Ariz.,

to October, 1872. On duty at Fort Whipple, Ariz., to January, 1873; Alcatraz Island, Cal., to March, 1873. In March and April, 1873, Acting Assistant Surgeon Semig was on duty with expedition against the Modoc Indians, in which service he was twice wounded, suffering loss of the left leg. In hospital at San Francisco, Cal., until June, 1874, when he was assigned to duty at the Presidio San Francisco, remaining there until appointed assistant surgeon, United States Army, November 10, 1874, after which he continued on duty at the same post until April, 1875. On duty at Fort Yuma, Cal., to August, 1876; Camp Halleck, Nev., to September, 1876; post surgeon, San Diego Barracks, Cal., to July, 1877; Camp McDermitt, Nev., to November, 1878; Fort Johnston, N. C., to July, 1879; Fort Fred Steele, Wyo., to June 12, 1882. From September 1, 1881, to March 8, 1882, he was on sick leave, though remaining at his station. On June 12, 1882, he was relieved from duty at Fort Fred Steele, and again placed upon sick leave, which continued to his death, August 1, 1883.

First Lieut. E. D. Schuè, assistant surgeon, served as acting assistant surgeon, United States Army, in the Department of Dakota, from June 13 to November 17, 1879, and at David's Island, New York Harbor, from December 15, 1879, until appointed assistant surgeon, United States Army, February 17, 1880. Continued on duty at David's Island, New York Harbor, N. Y., until April, 1880; post surgeon, Fort Grant, Ariz., until March, 1881, and at Camp Thomas, Ariz., from that time until date of his death, October 1, 1883.

Capt. Joseph H Bailey was appointed assistant surgeon, United States Army, November 28, 1834. He was on duty at Fort Gibson, Ark., until April, 1840; on field duty in Florida to August, 1840; on sick leave until August, 1841; resumed duty and served in Florida to August, 1842; on duty at Fort Towson, Ark., to April, 1844; Fort Smith, Ark., to December, 1850; at Madison Barracks, N. Y., to April, 1852; Fort Mackinac, Mich., to September, 1854; Fort Hamilton, N. Y., to April, 1859; on duty at Jefferson Barracks, Mo., to May, 1861; acting medical purveyor, Saint Louis, Mo., May to August, 1861; in charge of general hospital, New House of Refuge, Saint Louis, Mo., to July, 1862. He was placed upon the retired list September 13, 1862, but continued to perform duty after retirement at Camp Chase, Ohio, to December, 1862; at Allegheny Arsenal, Pittsburgh, Pa., until March, 1863; on duty with the governor of New York to March, 1866, and at Allegheny Arsenal, Pa., to December 21, 1867, when he was relieved from duty and proceeded to his home.

Capt. Henry R. Silliman was appointed assistant surgeon, United States Army, May 28, 1861, and was appointed captain and major by brevet for faithful and meritorious services during the war. He was on duty with the Army of the Potomac from May to August, 1861; a, Fort Laramie, Wyo., to June, 1862; Fort Kearney, Nebr., to March, 1863; Campbell and Saint Aloysius general hospitals, Washington, D. C., May to June, 1863; Fort Delaware, Del., to June, 1864; acting medical purveyor, Hilton Head, S. C., from August to October, 1864. On duty at Filbert street general hospital, Philadelphia, Pa., to December, 1864; at general hospital, Pittsburgh, Pa., to December, 1865; post surgeon, Harrisburg, Pa., to April, 1866; on duty at Camp Cadwallader, Philadelphia, Pa., to June, 1866; post surgeon, Schuylkill Arsenal, Philadelphia, Pa., to August, 1866, and Fort Wadsworth, Dak., to April, 1867. May 9, 1867, he was placed on the list of retired officers of that class in which the disability results from long and faithful service, or some injury incident thereto, in accordance with section 17 of the act approved

August 3, 1861. He performed no duty after retirement from active service.

Surgeon-General, United States Army.

The foregoing annual report of the finances and general transactions of the office of the Surgeon-General, United States Army, was prepared and completed by the late Surgeon-General Charles H. Crane, previous to his death. It is respectfully submitted, without his signature, to the honorable the Secretary of War.

D. L. HUNTINGTON,
Acting Surgeon-General, United States Army.

SURGEON-GENERAL'S OFFICE, *October* 15, 1883.

APPENDIX A.—*A list of the principal diseases and injuries that have impaired the effective strength of the United States Army during the year, arranged in the order of numerical occurrence.*

[Mean strength: white, 20,914; colored, 2,390; aggregate, 23,304—Indian scouts not included.]

	White.		Colored.		Aggregate.
	Number of cases reported during the year.	Number per 1,000 of mean strength.	Number of cases reported during the year.	Number per 1,000 of mean strength.	Number per 1,000 of mean strength.
Diseases of the respiratory organs of which 65 per cent. white and 62 per cent. colored were catarrhs of the upper air passages	5,423	259	589	246	258
Wounds, accidents, and injuries Class V, of which 67 per cent. white and 54 per cent. colored were contusions and sprains	4,864	233	817	342	244
Malarial fevers	4,535	217	552	231	218
Diarrhea and dysentery	4,352	208	522	218	209
Other miasmatic diseases	238	11	10	4	11
Rheumatism, acute and chronic	3,026	145	384	161	146
Other diathetic diseases	132	6	19	8	6
Headache, neuralgia, and other nervous diseases	2,774	133	487	204	140
Diseases of the digestive organs	2,793	134	368	154	136
Skin diseases	2,651	127	224	94	122
Tonsillitis	1,461	70	248	104	73
Alcoholic inebriation, acute and chronic, and results	1,580	76	10	4	68
Other dietic diseases	3	0.1	.....	.....	0.1
Venereal diseases	1,260	60	157	66	61
Syphilis, constitutional	357	17	41	17	17
Other enthetic diseases	26	1	6	3	1
Diseases of the eye	549	26	75	31	27
Diseases of the urinary and genital organs (not venereal)	372	18	50	21	18
Diseases of the ear	222	11	8	3	10
Diseases of the heart and the circulatory system	192	9	8	3	9
Typhoid fever	150	7	8	3	7
Typho-malarial fever	126	6	6	2	6
Diseases of the bones and joints	102	5	13	5	5
Consumption and other tubercular diseases	93	4	12	5	5
Mumps	68	3	33	14	4
Hernia	80	4	7	3	4
Itch, tape worm, and other parasitic diseases	56	3	8	3	3
Insanity	57	3	2	0.8	3
Measles	35	2	22	9	3
Yellow fever	36	2	.....	.....	2
Sunstroke	28	1	.....	.....	1
Malingering and unclassified	19	0.9	1	0.4	0.9
Bright's disease	11	0.5	2	0.8	0.6
Diphtheria	12	0.6	.....	.....	0.5
Diabetes	10	0.5	.....	.....	0.4
Small-pox	4	0.2	.....	.....	0.2
Total	37,697	1,802.5	4,689	1,961.9	1,812.8

APPENDIX B.—*Table of deaths and discharges in the United States Army.*

Diseases, wounds, injuries, &c.	Deaths.		Discharges.	
	White.	Colored.	White.	Colored.
RESULTS OF GENERAL DISEASES AND DISEASES WHICH ARE NOT CLASSIFIED.				
Fevers:				
Typhoid	16	3	2	
Typho-malarial	8	3		
Malarial congestive	1			
Malarial continued	2		1	
Malarial intermittent			1	
Malarial cachexia			3	
Fever, yellow	3			
Fever, scarlet	1			
Small-pox	1			
Diphtheria	1			
Scrofula			1	1
Tuberculosis, acute, general	2			
Syphilis, primary			1	
Syphilis, constitutional	2		80	9
Cancer	1	1	2	
Tumors (character and location not specified)	2		2	
Rheumatism, acute			2	
Rheumatism, chronic			80	9
Gout			2	1
Dropsy	1			
Disease supra-renal capsules			1	
Goitre				1
Goitre exophthalmic				1
Anæmia, pernicious			1	
Anæmia, simple			9	
Feeble constitution from imperfect development			5	
General debility (causes undetermined)			10	
General atrophy, muscular			4	
Old age			11	
Delirium tremens	3			
Inebriety, alcoholic, acute	1			
Inebriety, alcoholic, chronic	1		7	
Opium eating, chronic			1	
Cause unknown (found dead)	1			
DISEASES OF THE EYE AND EAR.				
Lids, conjunctivitis, chronic			6	1
Lachrymal sac, inflammation of			2	
Cornea, opacity of			3	
Cornea, ulcer of			1	
Iris, inflammation of			2	
Mydriasis, (cause not reported)			1	
Lens, cataract of			3	
Retina, night blindness				1
Retina, inflammation of			1	
Amaurosis			3	1
Neuro-retinitis			2	
Optic-neuritis			2	
Glaucoma				1
Defective vision (cause not reported)			6	
Myopia			7	1
Astigmatism			1	
Loss of one eye			1	
Loss of one eye, with impairment of the other			1	
Ear, internal, inflammation of	1		5	
Otorrhœa, chronic			4	1
Deafness (cause not reported)			18	1
DISEASES OF THE BRAIN AND NERVOUS SYSTEM.				
Insanity			52	2
Hypochondriasis			1	
Mental deficiency			5	1
Imbecility			7	2
Nostalgia			3	
Masturbation			2	
Brain, acute, congestion of	3			
Brain, general, inflammation of	4		1	
Brain, membranes	3			
Brain, softening of	1			
Brain, hemorrhage of	1			
Brain, embolism of	1			
Brain, apoplexy of	2	1		1
Epilepsy	1	1	34	2
Headache, chronic			9	

August 3, 1861. He performed no duty after retirement from active service.

Surgeon-General, United States Army.

The foregoing annual report of the finances and general transactions of the office of the Surgeon-General, United States Army, was prepared and completed by the late Surgeon-General Charles H. Crane, previous to his death. It is respectfully submitted, without his signature, to the honorable the Secretary of War.

D. L. HUNTINGTON,
Acting Surgeon-General, United States Army.

SURGEON-GENERAL'S OFFICE, *October* 15, 1883.

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[Mean strength: white, 20,914; colored, 2,390; aggregate, 23,304—Indian scouts not included.]

	White.		Colored.		Aggregate.
	Number of cases reported during the year.	Number per 1,000 of mean strength.	Number of cases reported during the year.	Number per 1,000 of mean strength.	Number per 1,000 of mean strength.
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Wounds, accidents, and injuries Class V, of which 67 per cent. white and 54 per cent. colored were contusions and sprains	4,864	233	817	342	244
Malarial fevers	4,535	217	552	231	218
Diarrhea and dysentery	4,352	208	522	218	209
Other miasmatic diseases	238	11	10	4	11
Rheumatism, acute and chronic	3,026	145	384	161	146
Other diathetic diseases	132	6	19	8	6
Headache, neuralgia, and other nervous diseases	2,774	133	487	204	140
Diseases of the digestive organs	2,793	134	368	154	136
Skin diseases	2,651	127	224	94	123
Tonsillitis	1,461	70	248	104	73
Alcoholic inebriation, acute and chronic, and results	1,580	76	10	4	68
Other dietic diseases	3	0.1	.....	.....	0.1
Venereal diseases	1,260	60	157	66	61
Syphilis, constitutional	357	17	41	17	17
Other enthetic diseases	26	1	6	3	1
Diseases of the eye	549	26	75	31	27
Diseases of the urinary and genital organs (not venereal)	372	18	50	21	18
Diseases of the ear	222	11	8	3	10
Diseases of the heart and the circulatory system	192	9	8	3	9
Typhoid fever	150	7	8	3	7
Typho-malarial fever	126	6	6	3	6
Diseases of the bones and joints	102	5	13	5	5
Consumption and other tubercular diseases	93	4	12	5	5
Mumps	68	3	33	14	4
Hernia	80	4	7	3	4
Itch, tape worm, and other parasitic diseases	56	3	8	3	3
Insanity	57	3	2	0.8	3
Measles	35	2	22	9	3
Yellow fever	36	2	.....	.....	2
Sunstroke	28	1	.....	.....	1
Malingering and unclassified	19	0.9	1	0.4	0.9
Bright's disease	11	0.5	2	0.8	0.6
Diphtheria	12	0.6	.....	.....	0.5
Diabetes	10	0.5	.....	.....	0.4
Small-pox	4	0.2	.....	.....	0.2
Total	37,697	1,802.5	4,689	1,961.9	1,818.8

APPENDIX B.—*Table of deaths and discharges in the United States Army.*

Diseases, wounds, injuries, &c.	Deaths.		Discharges.	
	White.	Colored.	White.	Colored.
S OF GENERAL DISEASES AND DISEASES WHICH ARE NOT CLASSIFIED.				
:				
)hoid	16	3	2	
)ho-malarial	8	3		
larial congestive	1			
larial continued	2		1	
larial intermittent			1	
l cachexia			3	
yellow	3			
scarlet	1			
ox	1			
erla	1			
a			1	1
ulosis, acute, general	2			
s, primary			1	
s, constitutional	2		80	9
	1	1	2	
) (character and location not specified)	2		2	
atism, acute			2	
atism, chronic			80	9
			2	1
	1			
) supra-renal capsules			1	
				1
exophthalmic				1
a, pernicious			1	
a, simple			9	
constitution from imperfect development			5	
l debility (causes undetermined)			10	
l atrophy, muscular			4	
			11	
m tremens	3			
ty, alcoholic, acute	1			
ty, alcoholic, chronic	1		7	
eating, chronic			1	
nknown (found dead)	1			
DISEASES OF THE EYE AND EAR.				
njunctivitis, chronic			6	1
mal sac, inflammation of			2	
, opacity of			3	
, ulcer of			1	
flammation of			2	
sis, (cause not reported)			1	
ataract of			3	
night blindness				1
inflammation of			1	
osis			3	1
retinitis			2	
euritis			2	
ma				1
ve vision (cause not reported)			6	
			7	1
atism			1	
one eye			1	
one eye, with impairment of the other			1	
ternal, inflammation of	1		5	
ea, chronic			4	1
se (cause not reported)			18	1
DISEASES OF THE BRAIN AND NERVOUS SYSTEM.				
y			52	2
nondriasis			1	
deficiency			5	1
lity			7	2
ria			3	
bation			2	
cute, congestion of	3			
eneral, inflammation of	4		1	
nembranes	3			
oftening of	1			
emorrhage of	1			
mbolism of	1			
poplexy of	2	1		1
y	1	1	34	2
he, chronic			9	1

APPENDIX B—*Table of deaths, &c.*—Continued.

Diseases, wounds, injuries, &c.	Deaths.		Discharges.	
	White.	Colored.	White.	Colored.
Vertigo, chronic			1	
Menière's disease			1	
Spinal cord, inflammation of	1		3	
Brain and spinal cord, sclerosis of	1		1	
Paralysis	1		8	
Chorea			2	
Neuralgia			10	3
Nervous prostration			4	
DISEASES OF THE RESPIRATORY ORGANS.				
Consumption, pulmonary	11		37	5
Lungs, inflammation of	12	3	6	9
Lungs, hemorrhage of	2		2	
Lungs, consolidation of			1	
Lungs, emphysema of			2	
Lungs, inflammation of pleura of				1
Bronchitis, acute	2			
Bronchitis, chronic	2		16	1
Ozœna, chronic			5	1
Asthma			5	
Dyspnœa (cause not reported)			2	
Larynx, inflammation of, chronic			1	
DISEASES OF THE CIRCULATORY SYSTEM.				
Heart disease (not specified)	1	1	3	1
Heart, hypertrophy of			15	1
Heart, fatty degeneration of	1		1	
Heart, angina of			2	
Heart, functional disturbances of (not specified)			8	1
Heart failure	5			
Heart clot	3			
Heart, valvular disease (not specified)	9		38	2
Aortic stenosis			1	
Aneurisms (not specified)	4		2	
Arterial rupture, idiopathic (not specified)	1			
Veins, inflammation of	2			
Veins of spermatic cord, enlargement of			8	2
Varicose veins (legs)			5	
DISEASES OF THE DIGESTIVE SYSTEM AND ORGANS OF ASSIMILATION.				
Tonsils, inflammation of			3	
Stomach, inflammation of, acute	1			
Stomach, inflammation of, chronic			4	
Stomach, ulcer of			1	
Dyspepsia, chronic			8	
Spleen, enlargement of	1			
Liver, inflammation of	2		2	
Liver, abscess of	3			
Liver, cirrhosis of	3		1	
Hepatic colic		1		
Constipation, chronic			3	
Diarrhœa, acute	2			
Diarrhœa, choleraic	1			
Diarrhœa, chronic			6	2
Dysentery, acute	4	1		
Dysentery, chronic	1		6	1
Intestines, ulceration of (location not specified)	1			
Intestines, peritoneal inflammation of, acute	1			
Intestines, peritoneal inflammation of, chronic	1			
Intestines, peritoneal inflammation of, suppurative	1			
Rectal stricture				1
Fistula in ano			2	
Prolapsus ani			2	
Piles			5	1
Abdominal rupture			2	
Hernia, ventral			1	
Hernia, femoral			1	
Hernia, inguinal			45	4
DISEASES OF THE URINARY ORGANS AND GENERATIVE SYSTEM.				
Kidneys, inflammation of	1		2	
Kidneys, Bright's disease of	4		5	1
Kidneys, cirrhosis of	1		1	
Diabetes	1		3	

APPENDIX B—*Table of deaths, &c.*—Continued.

Diseases, wounds, injuries, &c.	Deaths.		Discharges.	
	White.	Colored.	White.	Colored.
Bladder, inflammation of			4	1
Bladder, incontinence of			8	4
Urethra, stricture of	1		15	
Testicle, inflammation of, chronic (non-specific)			9	2
Testicle, inflammation of, gonorrhœal			1	1
Testicle, enlarged			2	
Spermatorrhœa			2	
DISEASES OF THE BONES AND JOINTS.				
Joints, inflammation of, chronic			13	1
Joints, anchylosis of			7	1
Spine, caries of			4	
Hip-joint, caries of			1	1
Exostosis			1	
Defective teeth			1	
Deformity of the feet			2	
DISEASES OF THE SKIN AND CELLULAR TISSUES.				
Eczema, chronic			2	
Psoriasis			1	
Bunions			1	
Ingrowing toe nail			1	
Abscesses, chronic			1	
Ulcers, chronic			5	
Whitlow			2	
WOUNDS, INJURIES, AND ACCIDENTS.				
Gunshot wounds of the—				
Head	1			
Face (premature discharge of cannon)	2			
Neck	2		1	
Chest and lungs	1		2	
Heart	1			
Shoulders			1	
Arm (premature discharge of cannon)	1			
Hand			4	3
Fingers			5	
Abdomen	1			
Pelvis	1			
Hip			1	
Foot			1	
Leg			1	1
Not specified	2	2	16	2
Homicides by—				
Shooting	5	4		
Stabbing	1	1		
Hanging	1			
Suicides by—				
Shooting	10			
Hanging	1			1
Throat cut	2			
Poison	4			
INJURIES NOT GUNSHOT.				
Head, contusion of			2	
Skull, simple fracture of, 4; injury of, 1	3		2	
Skull, compound fracture of	4			
Brain, concussion of	1		1	
Eyes, contusions and lacerations, with loss of vision of			2	
Spine, contusion of			1	
Spine, fracture of		1		
Clavicle, simple fracture of			1	1
Ribs, fracture of	1			
Shoulder, dislocation of			1	
Arm, simple fracture of, 2; sprain of, 2			4	
Hand, incised wound of, 1; dislocation of, 1; lacerated wound of, 1			2	1
Fingers, amputation of, 8; contusion of, 1; lacerated wound of, 1; incised wound of, 1			11	
Hip joint, dislocation of, 1; sprain of, 1			2	
Thigh, simple fracture of			1	
Patella, compound fracture of			1	
Knee-joint, luxation of, 1; incised wound of, 1; dislocation of, 1; old injury of, 1			4	
Leg, compound fracture of, 3; contusion of, 3; simple fracture of, 1			5	2

APPENDIX B—*Table of deaths, &c.*—Continued.

Diseases, wounds, injuries, &c.	Deaths.		Discharges.	
	White.	Colored.	White.	Colored.
Ankle, sprain of, 5; dislocation of, 1; compound fracture of, 1; incised wound of, 1; contusion of, 3; simple fracture of, 1	.....	.....	10	2
Foot, contusion of	.....	.....	2	.....
Frost-bite (not specified)	.....	.....	1	3
Punctured wound (not specified)	.....	.....	1	.....
Simple fractures (not specified)	.....	.....	2	.....
Contusions (not specified)	.....	.....	2	.....
Lacerated wounds (not specified)	.....	.....	1	.....
Incised wounds (not specified)	.....	.....	2	.....
Burns (location not specified)	.....	.....	1	.....
Crushing	1	.....	.....	.....
Dragged by horse	2	.....	.....	.....
Drowned	13	2	.....	.....
Lightning	1	1	.....	.....
Exposure to cold	2	.....	.....	.....
Total	214	26	879	101

APPENDIX C.—*Causes of rejection arranged in the order of numerical importance.*

[Total number of recruits examined: Whites, 5,954; colored, 426.]

	White.				Colored.			
	Rejected on primary examination.	Rejected on secondary examination at recruiting depots.	Total.	Ratio per 1,000 rejected.	Rejected on primary examination.	Rejected on secondary examination at recruiting depots.	Total.	Ratio per 1,000 rejected.
DISEASES OF THE CIRCULATORY SYSTEM.								
Varicocele	180	6	186	31.19	14	.....	14	32.86
Varicose veins	166	5	171	28.67	2	.....	2	4.69
Heart disease (not specified)	60	.....	60	10.06	6	.....	6	14.08
Functional disease of heart	53	.....	53	8.89	3	.....	3	7.04
Valvular disease of heart	24	5	29	4.86	1	.....	1	2.35
Heart disease, dilatation	1	1	2	.34	.....	1	1	2.35
Aneurismal varix	8	.....	8	1.34	1	.....	1	2.35
Total	492	17	509	85.35	27	1	28	65.73
DISEASES OF BONES, JOINTS, ETC.								
Deformity of lower extremities	81	.....	81	13.58	6	.....	6	14.08
Curvature of spine	54	.....	54	9.05	1	.....	1	2.35
Dental insufficiency	48	.....	48	8.05	5	.....	5	11.74
Results of disease and injury of joints	19	14	33	5.53	1	.....	1	2.35
Results of disease and injury of bones	12	1	13	2.18	.....	.....	.....	.....
Results of disease and injury of bones of extremities	9	.....	9	1.51	.....	.....	.....	.....
Results of disease and injury of bones of head	6	3	9	1.51	.....	.....	.....	.....
Disease of bones (not specified)	4	.....	4	.67	.....	.....	.....	.....
Deformity of upper extremities	7	.....	7	1.17	1	.....	1	2.35
Loss of fingers and toes	2	1	3	.50	2	.....	2	4.69
Deformed head	1	.....	1	.17	.....	.....	.....	.....
Muscular contraction	4	.....	4	.67	.....	.....	.....	.....
Muscular tenuity, special	2	.....	2	.34	.....	.....	.....	.....
Total	249	19	268	44.93	16	.....	16	37.56

APPENDIX C.—*Causes of rejection arranged in the order of numerical importance*—Cont'd.

	White.				Colored.			
	Rejected on primary examination.	Rejected on secondary examination at recruiting depots.	Total.	Ratio per 1,000 rejected.	Rejected on primary examination.	Rejected on secondary examination at recruiting depots.	Total.	Ratio per 1,000 rejected.
DISEASES OF THE ABDOMINAL VISCERA.								
Hernia	71	10	81	13.58	6	.....	6	14.08
Hæmorrhoids	73	.....	73	12.24	3	.....	3	7.04
Diseases of digestive organs	4	2	6	1.01	.....	.....	.....	.....
Relaxed abdominal rings	4	1	5	.84	.....	.....	.....	.....
Tumors, abdominal	2	1	3	.50	.....	.....	.....	.....
Fistula in ano	2	1	3	.50	.....	.....	.....	.....
Total	156	15	171	28.67	9	.....	9	21.13
DISEASES OF THE EYE.								
Defective vision, cause not stated	82	2	84	14.08	5	.....	5	11.74
Myopia	29	.....	29	4.86	1	.....	1	2.35
Disease of conjunctiva	7	.....	7	1.17	.....	.....	.....	.....
Color blind	4	.....	4	.67	.....	.....	.....	.....
Strabismus	3	1	4	.67	.....	.....	.....	.....
Incipient cataract	1	.....	1	.17	.....	.....	.....	.....
Total	126	3	129	21.62	6	.....	6	14.08
SPECIFIC CONTAGIOUS DISEASES.								
Syphilis, constitutional	75	5	80	13.41	10	1	11	25.82
Venereal diseases	43	.....	43	7.21	10	.....	10	23.47
Total	118	5	123	20.63	20	1	21	49.29
GENERAL DISEASES AND CONDITIONS.								
Evident chronic alcoholism	63	.....	63	10.56	.....	.....	.....	.....
General debility	10	.....	10	1.68	.....	.....	.....	.....
Rheumatism	3	6	9	1.51	.....	.....	.....	.....
Scrofula	4	2	6	1.01	.....	.....	.....	.....
Enlarged cervicle glands	4	.....	4	.67	1	.....	1	2.35
Malarial cachexia	2	.....	2	.34	.....	.....	.....	.....
Tonsillitis, chronic	1	.....	1	.17	1	.....	1	2.35
Mumps	1	.....	1	.17	.....	.....	.....	.....
Dropsy	1	.....	1	.17	.....	.....	.....	.....
Scurvy	1	.....	1	.17	.....	.....	.....	.....
Total	90	8	98	16.43	2	.....	2	4.69
DEFECTS AND DISEASES OF THE RESPIRATORY AND VOCAL ORGANS.								
Insufficient chest capacity	48	.....	48	8.05	4	.....	4	9.39
Diseases of lungs and results	20	1	21	3.52	.....	1	1	2.35
Malformation of chest	11	.....	11	1.84	.....	.....	.....	.....
Consumption	3	6	9	1.51	.....	.....	.....	.....
Chronic nasal catarrh	3	.....	3	.50	.....	.....	.....	.....
Defective speech	3	.....	3	.50	.....	.....	.....	.....
Total	88	7	95	15.92	4	1	5	11.74
DISEASES OF THE TEGUMENTARY SYSTEM.								
Skin diseases	26	2	28	4.69	1	.....	1	2.35
Ulcers and cicatrices	16	2	18	3.02	2	.....	2	4.69
Ingrowing toe nail	11	.....	11	1.84	.....	.....	.....	.....
Corns and bunions	9	.....	9	1.51	.....	.....	.....	.....
Total	62	4	66	11.06	3	.....	3	7.04

APPENDIX C.—*Causes of rejection arranged in the order of numerical importance*—Cont'd.

	White.				Colored.			
	Rejected on primary examination.	Rejected on secondary examination at recruiting depots.	Total.	Ratio per 1,000 rejected.	Rejected on primary examination.	Rejected on secondary examination at recruiting depots.	Total.	Ratio per 1,000 rejected.
DISEASES OF THE BRAIN AND NERVOUS SYSTEM.								
Mental incapacity	14	6	20	3.35	3	.....	3	7.04
Epilepsy	1	5	6	1.01	.....	2	2	4.69
Former sunstroke	1	.....	1	.17	.....	.....	.....	.....
Paralysis	1	.....	1	.17	.....	.....	.....	.....
Meningitis	.....	1	1	.17	.....	.....	.....	.....
Nervous irritability	.....	1	1	.17	.....	.....	.....	.....
Total	17	13	30	5.03	3	2	5	11.74
DISEASES OF THE GENITALS AND URINARY ORGANS.								
Deformity of genitals, including undescended and malformed testicles	18	5	18	3.02	.....	.....	.....	.....
Stricture of urethra	1	5	6	1.01	.....	.....	.....	.....
Hydrocele	5	.....	5	.84	.....	.....	.....	.....
Incontinence of urine	.....	4	4	.67	.....	.....	.....	.....
Disease of the urinary organs (not venereal)	1	.....	1	.17	.....	.....	.....	.....
Total	20	14	34	5.70	.....	.....	.....	.....
DISEASES OF THE EAR.								
Deafness (cause not specified)	4	7	11	1.84	.....	.....	.....	.....
Diseases of the internal ear	1	.....	1	.17	.....	.....	.....	.....
Diseases of the external ear	1	.....	1	.17	.....	.....	.....	.....
Total	6	7	13	2.17	.....	.....	.....	.....
GENERAL DISQUALIFICATIONS.								
Under age	105	.....	105	17.61	12	.....	12	28.17
Deficient physical development	88	6	94	15.76	.....	.....	.....	.....
Imperfect knowledge of the English language	85	.....	85	14.25	.....	.....	.....	.....
Under height	83	.....	83	13.92	9	.....	9	21.13
Over age	25	2	27	4.53	.....	.....	.....	.....
Under weight	19	.....	19	3.19	1	.....	1	2.35
Over weight	10	.....	10	1.68	.....	.....	.....	.....
Over height	6	.....	6	1.01	3	.....	3	7.04
General unfitness (not specified)	39	.....	39	6.54	7	.....	7	16.43
Ex-military convicts	15	.....	15	2.52	.....	.....	.....	.....
Doubtful character	12	.....	12	2.01	.....	.....	.....	.....
Previous discharge for disability	6	.....	6	1.01	.....	.....	.....	.....
Miscellaneous (married, child living, &c.)	27	.....	27	4.53	4	.....	4	9.39
Total	520	8	528	88.53	36	.....	36	6.03
Aggregate	1,944	120	2,063	345.91	126	5	131	307.51

REPORT OF THE PAYMASTER-GENERAL.

REPORT

OF

THE PAYMASTER-GENERAL.

PAYMASTER-GENERAL'S OFFICE,
Washington, D. C., October 10, 1883.

SIR: I have the honor to submit my annual report of the transactions of the Pay Department of the Army for the year ending June 30, 1883.

The tabular statements herewith show in detail the fiscal operations of the Department for that year, summarily stated as follows:

RECEIPTS AND DISBURSEMENTS DURING THE FISCAL YEAR ENDING JUNE 30, 1883.

Balance in hands of paymasters July 1, 1882	$1,385,675 45
Amount received from the Treasury	13,310,247 66
Amount received from soldiers' deposits	407,544 68
Amount received from paymasters' collections	386,842 75
Total to be accounted for	15,490,310 54

Accounted for as follows:

Disbursements:		
To the Army on pay-rolls	$12,325,248 00	
To the Army on Treasury certificates	481,226 31	
To Military Academy	184,460 71	
To volunteers on Treasury certificates	391,239 54	
Total	13,382,164 56	
Surplus funds deposited in Treasury	269,086 93	
Paymasters' collections deposited in Treasury	386,842 75	
Balance in hands of paymasters June 30, 1883	1,452,216 30	
Total accounted for		15,490,310 54

The amount disbursed to the Army on Treasury certificates was principally in the settlement of officers' claims for back pay under the decision rendered in the case of Tyler *vs.* United States. (105 U. S. R., 244.)

Since the date of my last report five officers of this department, having attained the age of 64 years, have been retired under the act of June 30, 1882; one officer has died, and one has been dismissed the service for misappropriation of the public funds. Maj. J. R. Wasson, the officer last referred to, was a defaulter in the sum of $5,452. The amount was made good to the United States during the progress of his trial.

No system of accounting, however perfect, will prevent a corrupt official, who from the nature of his office is necessarily trusted with the custody of funds, from proving recreant to his trust. The highest end that can be attained is the prompt and speedy detection of any attempt

to tamper with or misappropriate the funds in his keeping and for which he is accountable. The system now in use in this office it is believed accomplishes this end.

I would recommend the repeal of the proviso of the act of April 20, 1874, which provides that no officer detailed for the purpose of inspecting the accounts of the disbursing officers of the Army shall be in anyway connected with the department or corps making the disbursement. The operation of this law prohibits the detail of officers for the purpose of inspection who, from their intimate knowledge of the accounts to be inspected, and the laws and regulations applicable thereto, are best qualified to detect any irregularity therein, and it compels the selection of officers whose knowledge of accounts is in most cases merely theoretical. The experience of this office shows that an expert accountant, where he is so disposed, can readily conceal his irregularities from such an officer.

Attention has been called through the public press to the duplication of officers' pay accounts in terms that would convey the impression that it is a common practice. It is but justice to the officers of the Army to say that the records of this office show that the instances are rare where an officer is guilty of this offense, and considering the number of officers in the Army the percentage is exceedingly small.

The appropriation for mileage of officers for the fiscal year ending June 30, 1882, was $200,000. This sum before the close of the year was found to be insufficient to meet the demands thereon. An additional sum was asked and Congress appropriated $20,000 to supply the deficiency. Of this $220,000, appropriated for the service of that fiscal year, less than $1,000 remain unexpended. The amount appropriated for the fiscal year ending June 30, 1883, was $180,000. Of this amount it is estimated that full returns will show not to exceed $160,000 expended, showing a saving of near $60,000 in this item.

In this connection I beg leave to again recommend the repeal of so much of the act of July 24, 1876, as forbids payment of mileage over land-grant roads. It will be observed that the provision applies only to officers of the Army, while officers in the civil and naval service are not subject to such restriction. These land-grant roads form only a part of the through lines of travel, and an officer whose orders carry him over one of these roads, cannot avail himself of the cheaper through rates, but is obliged to submit to the local rates for part of his journey and obtain transportation orders from the Quartermaster's Department for the other part. These transportation orders cover merely the bare transportation, compelling the officer to pay the incidental expenses, which the allowance of mileage was intended to cover in addition to the cost of his fare, from his private purse. This discrimination against officers of the Army I do not think was contemplated or intended by the passage of the act referred to.

The number of deposits made by enlisted men under the act of May 15, 1872, during the last fiscal year was 7,902, amounting to $407,544.68. As compared with the results of last year this is a decrease in the amount deposited of $41,022.15, but an increase of 1,012 in the number of deposits. This large increase in the number of deposits is gratifying, as the number of deposits, not the amount, is the end sought. It indicates that a larger number of men by availing themselves of the benefits of the system, have thus voluntarily deposited a guarantee against the crime of desertion. The act of March 3, 1883, which allowed interest on the minimum deposit (five dollars), as recommended in my last report, promises to be productive of good results, as recent

returns show a material increase in the number of deposits. At the close of the last fiscal year there was $1,046,468.51 to the credit of this account. This amount has been increased to $1,090,434.85 at the close of the present year. There has been paid for interest on repayments during the year $26,123.60, a trifle less than 2½ per cent. per annum on the balance carried.

The pressing needs of legislation on the subject of paymasters' bonds impel me to again invite your attention to the matter. Officers experience difficulty in obtaining the required sureties owing to the construction placed by the accounting officers of the Treasury on the laws now in force relating to bonds of paymasters. They hold that each bond is a continuing bond from date of its approval, so long as the officer is in service under his current commission, notwithstanding the fact that a new bond is exacted every four years or oftener if the interests of the service demand it. The liability of a surety should have some definite limit. While persons may be perfectly willing to assume responsibilities which extend through a comparatively brief period, they hesitate to enter into such as may extend through a long indefinite term, and from which they can obtain no release. The legislation which has been enacted to remedy this evil in the matter of bonds of collectors of internal revenue (20 Stats., p. 327), and of postmasters (Rev. Stats., 3827), should be extended to paymasters.

Attention is invited to the accompanying report of Maj. A. B. Carey, paymaster, United States Army, in charge of the settlement of claims of colored soldiers and sailors, which is very satisfactory. The additional expense of placing the money in the hands of these claimants as required by law, has been exceedingly small.

I am, sir, very respectfully, your obedient servant,

WM. B. ROCHESTER,
Paymaster-General, United States Army.

The Hon. the SECRETARY OF WAR.

Statement showing the balance in the hands of each of the disbursing officers of the Pay-Department on July 1, 1882; the amount remitted to each from the Treasury or turned over by other agents during the fiscal year ending June 30, 1883; the amount accounted for by accounts and vouchers of expenditures or by transfers or replacements in the Treasury, and the balance remaining in the hands of paymasters to be accounted for in the next fiscal year.

Rank and name.	Balance in hands of each paymaster July 1, 1882.	Remitted from Treasury in the year ending June 30, 1883.	Received from other paymasters.	Soldiers' deposits.	Army paymasters' collections.	Total received and to be accounted for.	Surplus funds replaced in the Treasury.	Army paymasters' collections deposited.	Expenditures.	Transferred to other paymasters.	Balance in hands of each paymaster June 30, 1883.	Total accounted for.
COLONEL AND ASSISTANT PAYMASTER GENERAL.												
McClure, Dan'l	.....	$2,069,000 00	$265,626 20	$170 00	$404 29	$2,335,200 49	$6,606 24	$404 29	$146,032 39	$2,059,492 03	$122,665 54	$2,335,200 49
Febiger, Geo. L	$29,819 15	689,000 00	57,796 64	.....	123 65	776,739 44	21,000 00	123 65	34,166 46	711,912 08	9,537 25	776,739 44
LIEUTENANT-COLONEL AND DEPUTY PAYMASTER-GENERAL.												
Smith, Rodney	48,129 36	660,000 00	33,294 79	4,281 00	2,170 19	747,875 34	20,279 87	2,170 19	216,925 13	492,547 18	15,952 97	247,875 34
*Potter, J. B. M.	15,239 43	510,000 00	31,942 16	1,228 85	3,439 53	611,849 97	5,000 00	3,439 53	157,342 21	446,068 23	.....	611,849 97
Rucker, W. A	129,930 01	1,400,000 00	240,360 65	5,042 00	3,821 42	1,779,154 08	72,682 37	3,821 42	174,218 61	1,492,685 34	35,746 34	1,779,154 08
MAJOR AND PAYMASTER.												
Johnston, W. H	42,909 47	650,000 00	292,460 42	5,133 00	6,956 84	997,459 73	37,000 00	6,956 84	313,570 23	639,932 66	.....	997,459 73
Gibson, W. R	76,977 63	1,795,000 00	268,576 68	9,760 50	10,449 72	2,160,764 53	3,642 89	10,449 72	623,677 77	1,485,256 19	37,737 96	2,160,764 53
Sprague, Chas. J	16,530 02	....	550,927 47	3,334 00	5,240 93	576,032 42	3,610 17	5,240 93	299,303 61	219,560 47	48,317 24	576,032 42
Reese, H. B	145 84	.....	16,324 08	895 00	1,990 41	19,355 33	.....	1,990 41	16,142 35	1,222 57	.....	19,355 33
Smith, William	15,168 16	260,000 00	613,938 23	9,895 00	5,756 76	904,758 15	.....	5,756 76	351,001 10	546,272 01	1,728 28	904,758 15
Terrell, C. M	23,379 06	880,000 00	140,118 45	510 00	2,482 45	1,046,489 96	22,469 70	2,482 45	320,210 22	685,084 27	16,243 32	1,046,489 96
Stanton, T. H	33,465 73	1,065,000 00	131,205 35	8,539 43	10,874 68	1,249,085 18	3,300 43	10,874 68	323,674 64	850,545 01	60,690 42	1,249,085 18
Glenn, George E	33,512 22	408,000 00	862 91	5,328 00	3,490 16	451,193 29	9,787 41	3,490 16	309,982 80	113,650 03	14,282 89	451,193 29
Wingard, C. W.	20,112 18	.....	.....	30 00	333 01	20,475 19	.....	333 01	3,665 90	16,476 28	.....	20,475 19
Hall, P. P. G	11,705 60	260,000 00	206,026 27	4,177 00	2,542 45	484,451 32	3,296 01	2,542 45	98,273 65	316,149 25	64,189 96	484,451 32
Canby, J. P	18,265 22	70,000 00	98,350 67	6,398 56	3,633 95	196,648 40	.....	3,633 95	146,904 85	34,258 77	11,850 83	196,648 40
Candee, Geo. W	19,756 54	312,000 00	59,109 55	5,022 26	3,395 13	399,283 48	500 89	3,395 13	323,139 59	59,610 78	12,637 09	399,283 48
Dewey, I. O	33,574 34	.....	319,691 00	2,855 50	12,879 53	399,000 43	.....	12,879 53	368,932 70	7,668 08	14,525 12	399,000 43
A. B	51,698 17	744,159 40	104,017 86	.....	396 42	903,271 85	7,783 26	396 42	105,631 58	635,339 94	154,120 65	903,271 85

Willard, J. P.	14,300 90		148,341 25	10,096 00	4,637 28	177,375 43	4 00	4,637 28	118,530 42	25,118 49	29,085 24	177,375 43
Coxe, F. M.	16,061 33		267,815 00	5,479 15	5,131 57	294,487 05	12 42	5,131 57	276,082 67	4,000 00	9,260 39	294,487 05
Bates, A. E.	11,422 78	905,007 50	148,130 55	12,829 58	4,984 54	1,089,674 90	980 50	4,984 54	852,066 78	209,105 11	22,537 97	1,089,674 90
Wilson, C. I.	25,413 98		655,274 15	1,103 00	8,022 30	689,813,43	1,345 98	8,022 30	624,876 51	10,997 05	44,571 59	689,813 43
Eckels, W. H.	6,404 33		212,919 11	7,053 80	4,469 42	230,846 66		4,469 42	185,032 92	6,737 55	34,606 77	230,846 66
Blaine, J. E.	37,644 35		347,050 00	14,474 79	11,684 59	410,853 73		11,684 59	205,431 93	162,658 15	31,079 06	410,853 73
Roche, James R.	12,188 82		410,187 18	1,900 92	2,256 77	426,533 69	4,461 51	2,256 77	274,420 06	94,863 28	50,532 07	426,533 69
Towar, A. S.	18,655 33		414,047 49	5,124 60	6,669 42	444,496 84		6,669 42	305,302 50	111,755 06	20,769 86	444,496 84
Maynadier W. M.	50,333 13		380,001 34	25,251 25	29,958 12	485,543 84		29,958 12	446,782 19	8,803 53		485,543 84
Brodhead, J. A.			35,000 00	3,345 00	3,135 90	41,480 90		3,135 90	33,121 54	5,223 46		41,480 90
Arthur, William	12,308 28		741,335 46	8,271 00	8,517 31	770,432 05	2,192 07	8,517 31	717,553 39	4,752 39	37,416 89	770,432 05
‡Wasson, J. R.			120,591 38	6,023 01	3,708 19	130,322 58	85 95	3,708 19	91,214 25	35,314 19		130,322 58
Thomas, H. G.			255,000 00	18,369 80	10,360 32	283,730 12		10,360 32	236,111 30	10,000 00	27,258 50	283,730 12
Sharp, Alexander	28,268 08		257,164 38	15,861 50	13,012 46	314,306 42	1,427 38	13,012 46	272,113 64	163 44	27,589 50	314,306 42
Keefer, J. B.	4,102 08		80,114 18	5,078 05	3,506 04	92,800 35		3,506 04	78,084 72	8,212 15	2,997 44	92,800 35
Wham, J. W.	24,617 56		144,354 68	6,229 00	6,563 42	181,764 66		6,563 42	126,078 82	39,527 28	9,595 14	181,764 66
Sniffen, C. C.	28,600 89		191,580 28	10,424 76	7,052 42	237,658 35	3,498 38	7,052 42	154,786 38	38,830 08	33,491 09	237,658 35
§Smith, T. C. H.	58,631 77		90,292 07	11,212 10	6,416 55	166,582 49		6,446 55	139,787 60	20,348 34		166,582 49
Baird, G. W.	44,354 58		332,909 47	13,784 38	12,676 42	403,724 85	1,724 39	12,676 42	342,495 14	40,101 32	6,727 58	403,724 85
Larned, D. R.	25,552 79		169,000 00	13,813 91	7,371 57	215,738 27	515 51	7,371 57	180,104 94	7,293 91	20,452 34	215,738 27
Robinson, Geo. F.	23,333 32		160,500 00	8,596 45	6,267 49	198,697 26	40 80	6,267 49	127,396 30	26,934 38	38,058 29	198,697 26
Creary, W. E.	38,303 50	40,000 00	332,843 45	12,457 15	12,699 92	436,304 02	65 25	12,699 92	249,872 77	154,458 89	19,207 19	436,304 02
Dodge, F. S.	59,627 86	130,000 00	277,865 97	10,581 75	13,376 42	491,452 00		13,376 42	204,685 40	205,284 72	68,105 46	491,452 00
McClure, Chas.	7,997 42		239,010 12	5,825 25	8,580 63	261,413 42	50	8,580 63	211,089 06	16,313 21	25,430 02	261,413 42
Witcher, J. S.	51,536 96		167,225 12	13,789 00	10,427 01	242,978 09	2,240 62	10,427 01	195,434 77	30,070 23	4,805 46	242,978 09
Whipple, C. H.	22,191 05		265,646 23	10,523 75	13,901 29	312,262 32	100 98	13,901 29	257,432 93	8,827 12	32,000 00	312,262 32
Comgys, W. H.	4,881 42		252,656 39	11,752 21	11,030 30	280,320 32	1,311 28	11,030 30	221,306 83	29,050 00	17,621 91	280,320 32
Bash, D. N.	31,007 47		238,034 00	14,083 43	19,463 48	302,588 38	39 02	19,463 48	258,817 18	537 55	23,731 15	302,588 38
Tucker, W. F., jr.	17,096 80	3,000 00	416,940 25	20,054 35	16,427 32	473,518 72	3,033 11	16,427 32	381,042 44	30,220 76	42,795 09	473,518 72
Muhlenberg, J. C.	30,220 59		175,094 05	8,444 39	8,558 36	222,317 39		8,558 36	133,764 42	31,918 20	48,076 41	222,317 39
Poole, D. C.			181,165 22	4,257 50	4,960 19	190,382 91		4,960 19	150,355 84	18,660 07	16,406 81	190,382 91
Smith, Geo. R.		220,065 72	222,829 89	5,093 00	1,682 14	449,670 75	9,003 92	1,682 14	293,266 34	136,033 76	9,684 59	449,670 75
Clayton, Henry			288,277 11	8,221 50	11,130 55	307,632 16	29 79	11,130 55	181,722 02	105,136 56	9,613 24	307,632 16
Smyth, Wm. H.		240,015 04	237,183 61	3,706 75	6,359 89	487,265 29	20,000 00	6,359 89	218,407 83	231,968 83	10,528 74	487,265 29
Baker, John P.			385,806 30	1,829 50	1,431 63	389,067 43	14 33	1,431 63	309,796 94	19,869 88	57,954 65	389,067 43
Total	1,385,675 45	13,310,247 66	12,702,815 11	407,544 68	386,842 75	28,193,125 65	269,086 93	386,482 75	13,382,164 56	12,702,815 11	1,452,216 30	28,193,125 65

*Retired October 1, 1882. †Died August 30, 1882. ‡Dismissed to date July 3, 1883. §Retired March 24, 1883.

Statement of the account of the Pay Department with the several appropriations subject to its control during the fiscal year ending June 30, 1883.

Appropriations.	In account with the Treasury.					
	Balance in the Treasury July 1, 1882.	Amount of appropriations.	Unexpended balance deposited by paymasters.	Collections deposited by paymasters.	Repayment in settlement of accounts.	Total.
Pay, &c., of the Army, 1883		$12,200,000 00	$39 15	$126,872 64	$1 17	$12,326,912 96
Pay of the Military Academy, 1883		212,832 50				212,832 50
Pay of the Army, 1882	$69,191 04		187,357 06	89,302 32	559 85	346,410 27
Mileage, 1882	308 29			676 49		984 78
General expenses, 1882	33,632 85		5,112 01	1,346 93	216 00	40,307 79
Pay of the Military Academy, 1882	47,088 31		2,297 04		83 30	49,468 65
Pay of the Army, 1881	85,898 52		12,880 99	694 26	1,067 33	100,541 10
Pay of the Army, 1881 and prior years		400,000 00				400,000 00
Mileage, 1881	2,644 88		5,108 80	410 18		8,253 86
General expenses, 1881	19,793 05		11,471 44	252 35		31,516 84
Pay of the Military Academy, 1881	35,699 38					35,699 38
Pay, traveling, and general expenses of the Army, 1880			13,624 71	1,914 42	193 63	15,732 76
Pay, traveling, and general expenses of the Army, 1880 and prior years		550,000 00				550,000 00
Pay of the Military Academy, 1880				46		46
Pay, traveling, and general expenses of the Army, 1879 and prior years		434 80				434 80
Pay of 2 and 3 years volunteers				43 28	13,701 92	13,745 20
Pay of 2 and 3 years volunteers, 1871 and prior years		268,934 30				268,934 30
Bounty to volunteers, their widows, and legal heirs					6,876 97	6,876 97
Bounty to volunteers, their widows, and legal heirs, 1871 and prior years		394,427 88				394,427 88
Bounty to volunteers and regulars					25 00	25 00
Traveling expenses, California and Nevada volunteers		155 12				155 12
Traveling expenses, First Michigan Cavalry Voluntrees		359 34				359 34
Extra pay to officers and men who served in the Mexican war		479 00		21 00		500 00
Pay of volunteers Mexican war, 1871 and prior years		476 49				476 49
Bounty to Fifteenth and Sixteenth Missouri Cavalry Volunteers		7,000 00				7,000 00
Pay of mounted riflemen under Col. John C. Frémont in 1846, 1871 and prior years		206 66				206 66
Pay of Florida volunteers, 1871 and prior years		680 20				680 20
Bounty, act July 28, 1866					4,785 70	4,785 70
Bounty, act July 28, 1866, 1880 and prior years		140,000 00				140,000 00
TRANSFER ACCOUNTS.						
Pay, traveling, and general expenses of the Army, 1880		23,696 58			29 35	23,725 93
Pay of the Military Academy, 1880		3 89				3 89
Pay of 2 and 3 years volunteers		28,574 58			1,533 63	30,108 21
Bounty, act of July 28, 1866					1,549 05	1,549 05

Payment of expenses under the reconstruction acts			2,854 07					2,854 07
Bounty to volunteers, their widows, and legal heirs			2,393 82					2,393 82
COLORED CLAIMS.								
Collection and payment of bounty, &c., due colored soldiers and sailors, 1881–'82						76 87		76 87
Collection and payment of bounty, &c., due colored soldiers and sailors, 1883			2,900 00					2,900 00
Pay of 2 and 3 years volunteers. Reappropriated				597 39				597 39
Pay, bounty, &c., due colored soldiers								
Total	294,256 32	14,226,408 78	238,578 59	221,534 33	30,690 77	15,021,477 74		

Statement of the account of the Pay Department with the several appropriations, &c.—Continued.

Appropriations.	In account with the Treasury.					Balance in hands of paymasters June 30, 1883.	Total balance June 30, 1883.
	Am't drawn by requisition of Pay Dept.	Am't drawn by requisition of War Dept.	Am't covered into surplus fund, act July 20, 1874.	Total.	Balance in the Treasury June 30, 1883.		
Pay, &c., of the Army, 1883	$12,086,000 00	$86,455 44	.....	$12,172,455 44	$154,457 52	$1,221,299 42	$1,375,756 94
Pay of the Military Academy, 1883	198,000 00	.....	.....	198,000 00	14,832 50	28,820 53	43,653 03
Pay of the Army, 1882	65,000 00	45,970 72	.....	110,970 72	235,439 55	14,859 67	250,299 22
Mileage, 1882	.....	.....	.....	.....	984 78	.....	984 78
General expenses, 1882	5,000 00	10 40	.....	5,010 40	35,297 39	.....	35,297 39
Pay of the Military Academy, 1882	7 50	.....	.....	7 50	49,461 15	.....	49,461 15
Pay of the Army, 1881	85,000 00	2,354 13	$13,186 97	100,541 10	.....	19,506 24	19,506 24
Pay of the Army, 1881 and prior years	.....	.....	.....	.....	400,000 00	.....	400,000 00
Mileage, 1881	15 04	20 50	8,218 32	8,253 86	.....	.....	.....
General expenses, 1881	2,000 00	1,196 33	28,320 51	31,516 81	.....	.....	.....
Pay of the Military Academy, 1881	.....	.....	35,699 38	35,699 38	.....	.....	.....
Pay, traveling, and general expenses of the Army, 1880	.....	.....	15,732 76	15,732 76	.....	.....	.....
Pay, traveling, and general expenses of the Army, 1880 and prior years	415,000 00	14,173 57	.....	429,173 57	120,826 43	59,774 56	180,600 99
Pay of the Military Academy, 1880	.....	.....	46	46	.....	.....	.....
Pay, traveling, and general expenses of the Army, 1879 and prior years	434 80	.....	.....	434 80	.....	.....	.....
Pay of 2 and 3 years volunteers	.....	.....	13,745 20	13,745 20	.....	.....	.....
Pay of 2 and 3 years volunteers, 1871 and prior years	117,305 13	1,629 17	.....	118,934 30	150,000 00	18,635 39	168,635 39
Bounty to volunteers, their widows, and legal heirs	.....	.....	6,876 97	6,876 97	.....	.....	.....
Bounty to volunteers, their widows, and legal heirs, 1871 and prior years	244,327 38	100 50	.....	244,427 88	150,000 00	59,240 42	209,240 42
Bounty to volunteers and regulars	.....	.....	25 00	25 00	.....	.....	.....
Traveling expenses, California and Nevada volunteers	155 12	.....	.....	155 12	.....	.....	.....
Traveling expenses, First Michigan Cavalry Volunteers	359 34	.....	.....	359 34	.....	.....	.....
Extra pay to officers and men who served in the Mexican war	500 00	.....	.....	500 00	.....	487 67	487 67
Pay of volunteers, Mexican war, 1871 and prior years	456 49	20 00	.....	476 49	.....	.....	.....
Bounty to Fifteenth and Sixteenth Missouri Cavalry Volunteers	7,000 00	.....	.....	7,000 00	.....	3,647 02	3,647 02
Pay of mounted riflemen under Col. John C. Frémont in 1846, 1871 and prior years	206 66	.....	.....	206 66	.....	.....	.....
Pay of Florida volunteers, 1871 and prior years	680 20	.....	.....	680 20	.....	.....	.....
Bounty, act July 28, 1866	.....	.....	4,785 70	4,785 70	.....	.....	.....
Bounty, act July 28, 1866, 1880 and prior years	79,900 00	100 00	.....	80,000 00	60,000 00	18,014 69	78,014 69
TRANSFER ACCOUNTS.							
Pay, traveling, and general expenses of the Army, 1880	.....	23,725 93	.....	23,725 93	.....	.....	.....
Pay of the Military Academy, 1880	.....	3 89	.....	3 89	.....	.....	.....
Pay of 2 and 3 years volunteers	.....	29,322 40	785 81	30,108 21	.....	.....	.....

Bounty, act July 28, 1866			1,549 05	1,549 05			
Payment of expenses under the reconstruction acts		2,854 07		2,854 07			
Bounty to volunteers, their widows, and legal heirs		2,393 32		2,393 32			
COLORED CLAIMS.							
Collection and payment of bounty, &c., due colored soldiers and sailors, 1881–'82					76 87		
Collection and payment of bounty, &c., due colored soldiers and sailors, 1883	2,900 00			2,900 00			
Pay of 2 and 3 years volunteers. Reappropriated			597 39	597 39			
Pay, bounty, &c., due colored soldiers						7,930 69	7,930 69
Total	13,310,247 66	210,330 37	129,523 52	13,650,101 55	1,371,376 19	1,452,216 30	2,823,515 62

Statement showing the number of pay trips made, number of days consumed in travel, posts paid, miles traveled, and amount of field and office disbursements made by each disbursing officer of the Pay Department during the fiscal year ending June 30, 1883.

Number.	Paymasters.	No. of pay trips.	Days consumed.	No. of posts paid.	Miles traveled.						Payments.		
					Railroad.	Stage.	Steamer.	Ambulance.	Other conveyance.	Total.	In field.	In office.	Total.
	ASSISTANT PAYMASTERS-GENERAL.												
1	McClure, Daniel	1	1	1	108					108	$10,275 06	$135,757 33	$146,032 39
2	Febiger, George L											34,166 46	34,166 46
	DEPUTY PAYMASTERS-GENERAL.												
3	Smith, Rodney	6	44	15	1,050		2,304	30		3,384	31,091 94	185,833 19	216,925 13
4	Potter, J. B. M	3	11	11	2,125		162			2,287	66,726 52	90,615 69	157,342 21
5	Rucker, W. A			5							37,602 60	136,616 01	174,218 61
	PAYMASTERS.												
6	Johnston, William H	5	93	19	3,284		376	1,915		5,575	68,480 42	245,089 81	313,570 23
7	Gibson, William R	3	6	4	570			20		590	46,378 91	577,298 86	623,677 77
8	Sprague, Charles J	15	54	32	3,547		1,915	29	14	5,505	93,488 79	205,814 82	299,303 61
9	Reese, H. B	1	1	1							16,142 35		16,142 35
10	Smith, William	9	118	25	8,544	22		1,746		10,312	101,112 22	249,888 88	351,001 10
11	Terrell, Charles M			1								320,210 22	320,210 22
12	Stanton, T. H	6	80	26	13,069	35		462		13,566	132,400 95	191,273 69	323,674 64
13	Glenn, George E	8	39	19	13,000		392	31		13,423	47,713 37	262,269 43	309,982 80
14	Wingard, C. W											3,665 90	3,665 90
15	Hall, P. P. G	3	48	11	1,234		342	952		2,528	37,376 12	60,897 53	98,273 65
16	Canby, J. P	9	71	14	6,828	1,498	360			8,686	58,067 04	88,837 81	146,904 85
17	Candee, George W	4	12	4	1,448				4	1,452	8,687 30	314,452 29	323,139 59
18	Dewey, I. O	6	66	26	4,963		1,764	27		6,754	101,949 46	261,983 24	363,932 70
19	Carey, A. B	9	47	30	4,263		2,077			6,340	30,922 33	74,709 25	105,631 58
20	Willard, J. P	4	39	18	2,663	52		380		3,095	46,343 24	72,187 18	118,530 42
21	Coxe, F. M	18	76½	24	3,111	1,243	2,812		240	7,406	72,127 64	203,955 03	276,082 67
22	Bates, A. E	6	30	12	3,077		196	35		3,308	25,223 35	826,843 43	852,066 78
23	Wilson, C. I	10	46	30	4,370		993			5,363	103,586 47	521,290 04	624,876 51
24	Eckels, W. H	9	42	12	3,124	509	916	318		4,867	34,119 98	150,912 94	185,032 92
25	Blaine, J. E	11	119	19	922	919		3,001		4,842	118,092 94	87,338 99	205,431 93
26	Roche, J. R	2	14½	4	520	434	14	4		972	19,818 06	254,602 00	274,420 06
27	Towar, A. S	5	60	14	6,996	1,198		143		8,337	98,528 62	206,773 88	305,302 50

28	Maynadier, W. M	6	147	43	9,632	1,080		2,232		12,944	313,890 15	132,892 04	446,782 19
29	Brodhead, J. A	1	32	5	2,236			428		2,664	33,121 54		33,121 54
30	Arthur, William	33	53½	42	4,735		792			5,527	230,898 67	486,654 72	717,553 39
31	Wasson, J. B	4	76	9	2,119		978	600		3,697	70,511 49	20,672 76	91,214 25
32	Thomas, H. G	5	112	35	10,254			1,335		11,589	167,332 38	68,778 92	236,111 20
33	Sharp, Alex	6	151	31	4,229	1,505		1,902		7,636	244,07[illegible] 69	28,040 95	272,113 64
34	Keefer, J. B	8	42	11	5,931	2,696	488			8,115	39,084 54	39,000 18	78,084 72
35	Wham, J. W	7	99	13	3,408	1,202		1,187		5,797	79,357 33	46,721 49	126,078 82
36	Sniffen, C. C	6	67	18	876	1,368		784		3,028	85,190 94	69,595 44	154,786 38
37	Smith, T. C. H	10	76	23	3,720	417	1,150	659	160	6,106	84,085 88	55,701 72	139,787 60
38	Baird, George W	6	101	31	5,413			2,067	246	7,726	146,732 04	195,763 10	342,495 14
39	Larned, D. R	6	70	16	637	180	156	1,184		2,157	107,736 38	72,368 56	180,104 94
40	Robinson, George F	6	111	22	1,905			2,523		4,428	49,209 40	78,186 90	127,396 30
41	Creary, W. E	10	146	38	4,596	506		2,300		7,402	167,100 05	82,771 82	249,872 77
42	Dodge, F. S	3	99	28	1,601			1,462	30	3,093	138,568 82	66,116 58	204,685 40
43	McClure, Charles	11	23½	46	4,839			90		4,929	111,517 04	99,572 02	211,089 06
44	Witcher, J. S	6	111	26	5,106	1,025	84	1,025		7,190	135,158 02	60,276 75	195,434 77
45	Whipple, Charles H	6	67	23	2,354	560	576	1,142	80	4,712	149,148 94	108,283 99	257,432 93
46	Comegys, W. H	10	133	22	362	430		3,815		4,607	118,432 81	102,874 02	221,306 85
47	Bash, D. N	6	118	39	5,927			1,794		7,721	219,395 24	39,431 94	258,817 18
48	Tucker, W. F., jr	10	90	42	6,301			1,223		7,524	206,285 19	174,757 25	381,042 44
49	Muhlenberg, J. C	7	129	13	1,505		308	2,640		4,453	120,179 00	13,585 42	133,764 42
50	Poole, D. C	5	74	15	2,827	2,348	381	77		5,633	87,481 20	62,874 64	150,355 84
51	Smith, George R	5	71	28	7,107		1,639			8,746	184,717 27	108,549 07	293,266 34
52	Clayton, Henry	7	88	22	2,143			940		3,083	150,092 58	31,629 44	181,722 02
53	Smyth, William H	11	40	20	2,556			461	4	3,021	77,257 18	141,150 65	218,407 83
54	Baker, J. P	4	6	3	1,197			16		1,213	26,729 82	283,067 12	309,796 94
	Total	358	3,440	1,030	192,382	18,227	21,125	40,979	778	273,441	4,949,563 17	8,432,601 49	13,382,164 56

Statement showing the number of pay trips made, number of days consumed in travel, posts paid, miles traveled, and amount of field and office disbursements made by each disbursing officer of the Pay Department during the fiscal year ending June 30, 1883.

Number.	Paymasters.	No. of pay trips.	Days consumed.	No. of posts paid.	Miles traveled.						Payments.		
					Railroad.	Stage.	Steamer.	Ambulance.	Other conveyance.	Total.	In field.	In office.	Total.
	ASSISTANT PAYMASTERS-GENERAL.												
1	McClure, Daniel	1	1	1	108					108	$10,275 06	$135,757 33	$146,032 39
2	Febiger, George L											34,166 46	34,166 46
	DEPUTY PAYMASTERS-GENERAL.												
3	Smith, Rodney	6	44	15	1,050		2,304	30		3,384	31,091 94	185,833 19	216,925 13
4	Potter, J. B. M	3	11	11	2,125		162			2,287	66,726 52	90,615 69	157,342 21
5	Rucker, W. A			5							37,602 60	136,616 01	174,218 61
	PAYMASTERS.												
6	Johnston, William H	5	93	19	3,284		376	1,915		5,575	68,480 42	245,089 81	313,570 23
7	Gibson, William R	3	6	4	570			20		590	46,378 91	577,298 86	623,677 77
8	Sprague, Charles J	15	54	32	3,547		1,915	29	14	5,505	93,488 79	205,814 82	299,303 61
9	Reese, H. B	1	1	1							16,142 35		16,142 35
10	Smith, William	9	118	25	8,544	22		1,746		10,312	101,112 22	249,888 88	351,001 10
11	Terrell, Charles M			1								320,210 22	320,210 22
12	Stanton, T. H	6	80	26	13,069	35		462		13,566	132,400 95	191,273 69	323,674 64
13	Glenn, George E	8	39	19	13,000		392	31		13,423	47,713 37	262,269 43	309,982 80
14	Wingard, C. W											3,665 90	3,665 90
15	Hall, P. P. G	3	48	11	1,234		342	952		2,528	37,376 12	60,897 53	98,273 65
16	Canby, J. P	9	71	14	6,828	1,498	360			8,686	58,067 04	88,837 81	146,904 85
17	Candee, George W	4	12	4	1,448				4	1,452	8,687 30	314,452 29	323,139 59
18	Dewey, I. O	6	66	26	4,963		1,764	27		6,754	101,949 46	261,983 24	363,932 70
19	Carey, A. B	9	47	30	4,263		2,077			6,340	30,922 33	74,709 25	105,631 58
20	Willard, J. P	4	39	18	2,663	52		380		3,095	46,343 24	72,187 18	118,530 42
21	Coxe, F. M	18	76½	24	3,111	1,243	2,812		240	7,406	72,127 64	203,955 03	276,082 67
22	Bates, A. E	6	30	12	3,077		196	35		3,308	25,223 35	826,843 43	852,066 78
23	Wilson, C. I	10	46	30	4,370		993			5,363	103,586 47	521,290 04	624,876 51
24	Eckels, W. H	9	42	12	3,124	509	916	318		4,867	34,119 98	150,912 94	185,032 92
25	Blaine, J. E	11	119	19	922	919		3,001		4,842	118,092 94	87,338 99	205,431 93
26	Roche, J. R	2	14½	4	520	434	14	4		972	19,818 06	254,602 00	274,420 06
27	Towar, A. S	5	60	14	6,996	1,198		143		8,337	98,528 62	206,773 88	305,302 50

28	Maynadier, W. M	6	147	43	9,632	1,080		2,232		12,944	313,890	15	132,892 04	446,782	19
29	Brodhead, J. A	1	32	5	2,236			428		2,664	33,121	54		33,121	54
30	Arthur, William	33	53½	42	4,735		792			5,527	230,898	67	486,654 72	717,553	39
31	Wasson, J. B	4	76	9	2,119		978	600		3,697	70,541	49	20,672 76	91,214	25
32	Thomas, H. G	5	112	35	10,254			1,335		11,589	167,332	38	68,778 92	236,111	20
33	Sharp, Alex	6	151	31	4,229	1,505		1,902		7,636	244,07[illegible]	69	28,040 95	272,113	64
34	Keefer, J. B	8	42	11	5,931	2,696	488			8,115	39,084	54	39,000 18	78,081	72
35	Wham, J. W	7	99	13	3,408	1,202		1,187		5,797	79,357	33	46,721 49	126,078	82
36	Sniffen, C. C	6	67	18	876	1,368		784		3,028	85,190	94	69,595 44	154,786	38
37	Smith, T. C. H	10	76	23	3,720	417	1,150	659	160	6,106	84,085	88	55,701 72	139,787	60
38	Baird, George W	6	101	31	5,413			2,067	246	7,726	146,732	04	195,763 10	342,495	14
39	Larned, D. R	6	70	16	637	180	156	1,184		2,157	107,736	38	72,368 56	180,104	94
40	Robinson, George F	6	111	22	1,905			2,523		4,428	49,209	40	78,186 90	127,396	30
41	Creary, W. E	10	146	38	4,596	506		2,300		7,402	167,100	05	82,771 82	249,872	77
42	Dodge, F. S	3	99	28	1,601			1,462	30	3,093	138,568	82	66,116 58	204,685	40
43	McClure, Charles	11	23½	46	4,839			90		4,929	111,517	04	99,572 02	211,089	06
44	Witcher, J. S	6	111	26	5,106	1,025	34	1,025		7,190	135,158	02	60,276 75	195,434	77
45	Whipple, Charles H	6	67	23	2,354	560	576	1,142	80	4,712	149,148	94	108,283 99	257,432	93
46	Comegys, W. H	10	133	22	362	430		3,815		4,607	118,432	81	102,874 02	221,306	85
47	Bash, D. N	6	118	39	5,927			1,794		7,721	219,385	24	39,431 94	258,817	18
48	Tucker, W. F., jr	10	90	42	6,301			1,223		7,524	206,285	19	174,757 25	381,042	44
49	Muhlenberg, J. C	7	129	13	1,505		308	2,640		4,453	120,179	00	13,585 42	133,764	42
50	Poole, D. C	5	74	15	2,827	2,348	381	77		5,633	87,481	20	62,874 64	150,355	84
51	Smith, George R	5	71	28	7,107		1,639			8,746	184,717	27	108,549 07	293,266	34
52	Clayton, Henry	7	88	22	2,143			940		3,083	150,092	58	31,629 44	181,722	02
53	Smyth, William H	11	40	20	2,556			461	4	3,021	77,257	18	141,150 65	218,407	83
54	Baker, J. P	4	6	3	1,197			16		1,213	26,729	82	283,067 12	309,796	94
	Total	358	3,440	1,030	192,382	18,227	21,125	40,979	778	273,441	4,949,563	17	8,432,601 49	13,382,164	56

Statement by appropriations of approved and suspended disbursements in paymaster's accounts rendered during the fiscal year ending June 30, 1883, showing also the balance of suspensions remaining June 30, 1882, amount removed during the year, and the balance remaining June 30, 1883.

Titles of appropriations.	Disbursements.			Suspensions.			
	Total.	Approved.	Suspended.	Amount of suspensions remaining on books June 30, 1882.	Total suspensions.	Amount of suspension removed during fiscal year ending June 30, 1883.	Amount of suspensions remaining on books June 30, 1883.
Pay, traveling, and general expenses of the Army, 1884	1,066 66	1,066 66					
Signal Service, pay 1884	232 00	232 00					
Pay, traveling, and general expenses of the Army, 1883	11,268,576 36	11,252,076 09	16,500 27		16,500 27	6,661 62	9,838 65
Pay of the Military Academy, 1883	169,186 97	169,186 97					
Pay of the Army, 1882	1,069,156 72	1,067,458 76	1,697 96	7,664 51	9,362 47	7,581 72	1,780 75
Mileage, 1882	6,504 08	6,502 08	2 00	1,029 58	1,031 58	702 53	329 05
General expenses, 1882	28,034 38	27,988 31	46 07	1,674 80	1,720 87	1,053 48	667 39
Pay of the Military Academy, 1882	15,273 74	15,273 74					
Pay of the Army, 1881	74,021 77	73,842 37	179 40	1,979 06	2,158 46	403 20	1,755 26
Mileage, 1881	15 04	15 04		176 68	176 68	173 72	2 96
General expenses, 1881	1,640 71	1,640 71		323 71	323 71	177 42	146 29
Pay, traveling, and general expenses of the Army, 1880	1,024 69	1,024 69		2,724 12	2,724 12	1,922 85	801 27
Pay of the Military Academy, 1880				9 00	9 00	9 00	
Pay, traveling, and general expenses of the Army, 1879				2,081 35	2,081 35	152 40	1,928 95
Pay, traveling, and general expenses of the Army, 1878				1,963 67	1,963 67	372 82	1,590 85
Pay, traveling, and general expenses of the Army, 1877				1,007 97	1,007 97	10 56	997 41
Pay, traveling, and general expenses of the Army, 1876				967 91	967 91	32 50	935 41
Pay, traveling, and general expenses of the Army, 1875				1,050 90	1,050 90	321 25	729 65
Pay, traveling, and general expenses of the Army, 1874				548 77	548 77	23 51	525 26
Pay of the Army, 1873				649 85	649 85		649 85
Mileage, 1873				3 60	3 60		3 60
Pay of the Army, 1872				151 87	151 87	46	151 41
General expenses, 1872				44 45	44 45		44 45
Pay of the Army prior to July 1, 1871				205 36	205 36	30	205 06
Pay of the Army 1880 and prior years	355,225 44	355,225 44					
Pay of the Army 1879 and prior years	976 46	976 46					
Bounty to volunteers, their widows and legal heirs, 1871 and prior years	200,867 17	200,867 17					
Pay of 2 and 3 years' volunteers, 1871 and prior years	101,836 05	101,836 05					
Bounty, act of July 28, 1866	68,867 24	68,867 24					
Extra pay to officers and men who served in Mexican war	509 40	509 40					
Pay, bounty, &c., due colored soldiers	574 08	574 08					
Collection and payment, bounty, &c., 1881 and 1882				21 42	21 42		21 42

Collection and payment, bounty, &c., 1883	1,889 48	1,889 48					
Bounty to Fifteenth and Sixteenth Missouri Cavalry Volunteers	14,828 31	14,828 31					
Traveling expenses, First Michigan Cavalry, prior to July 1, 1879	359 34	359 34					
Traveling expenses, California and Nevada volunteers, prior to July 1, 1879	155 12	155 12					
Pay of volunteers, Mexican war, 1871, and prior years	456 49	456 49					
Mounted riflemen, volunteer under Col. John C. Fremont, for 1846, 1871, and prior years	206 66	206 66					
Pay of Florida volunteers, 1871, and prior years	680 20	680 20					
Total	13,382,164 56	13,363,738 86	18,425 70	24,278 58	42,704 28	19,599 34	23,104 94

WAR DEPARTMENT,
PAYMASTER-GENERAL'S OFFICE (BOUNTY DIVISION).
Washington, D. C., October 1, 1883.

GENERAL: In compliance with your instructions, I have the honor to submit the following report for fiscal year ending June 30, 1883, relative to the payment of claims for bounty, arrears of pay, &c., due colored soldiers or their heirs, under joint resolution of Congress of March 29, 1867, and section 2 of An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1880, and for other purposes," approved March 3, 1879.

There remained in my hands July 1, 1883, 73 claims received from the Freedmen's branch Adjutant-General's Office, amounting to $15,019.37. Of this amount, $6,514.60 was deposited to the credit of the Treasurer of the United States (having been outstanding more than seven years), and $574,08 paid to claimants, leaving on hand June 30, 1883, 68 of these *old claims*, and $7,930.69 for their payment. During the fiscal year ending June 30, 1883, 1,538 Treasury certificates adjusted under the act of March 3, 1879, were received from the Second Auditor of the Treasury, which, together with the 82 on hand July 1, 1882, aggregated $159,137.57. Of these, 1,373, amounting to $138,483.44, have been paid to claimants in person in current funds, and 23, amounting to $2,679.75, returned to the Second Auditor of the Treasury, leaving on hand June 30, 1883, 224 certificates and $27,974.38, for their payment.

All claims were prepared for payment in this office, and disbursements made as follows:

On certificates adjusted under act of March 3, 1879	$128,483 44
On old claims received from Freedmen's branch Adjutant-General's Office	574 08
Old claims deposited to credit Treasurer United States	6,514 60
Total	135,572 12

Sixteen thousand five hundred and fifty-six dollars and eleven cents of this amount was paid through the Post-Office Department by post-office money-orders, as provided by law.

Of the $2,900 appropriated to meet the expenses of making these payments, $1,889.48 was expended, and the remainder ($1,010.52) returned to the Treasury June 30, 1883.

In addition to the claims of colored soldiers paid as above, all Treasury certificates in favor of white claimants have been paid through this office by checks on the Treasury.

Very respectfully, your obedient servant,

A. B. CAREY,
Paymaster United States Army.

The PAYMASTER-GENERAL OF THE ARMY.

PUBLICATION OF WAR RECORDS.

REPORT

OF

PUBLICATION OF WAR RECORDS.

WAR DEPARTMENT, WAR RECORDS OFFICE,
Washington, D. C., October 13, 1883.

SIR: I have the honor to report progress in the publication of the Military Records of the War of the Rebellion since October 23, 1882.

The general examination of the records, both Union and Confederate, has been completed. Any further examination that may be necessary will be for such missing links as may be developed in the compilation. The formal reports of military operations made by the Union commanders have all been copied, and those made by the Confederate commanders will be copied by the end of the next fiscal year. In consequence of the progress thus indicated the force of copyists has been reduced from eighteen to ten, and a further reduction is contemplated in the estimates for the coming year.

The total cost of printing and binding the volumes issued up to October 1, 1883, has been $74,069.01.

The expenditures on account of printing, binding, &c., since the date of my last report, are as follows:

For composition, stereotyping, &c., of volumes still in the hands of the printer—

Volume XII, Part III	$2,059 91
Volume XIII	1,889 71
Volume XIV	2,207 91
Volume XV	2,251 62
Volume XVI, Part I	1,526 08

To complete—

Volume VI	6,918 44
Volume VII	7,712 52
Volume VIII	6,472 66
Volume IX	6,034 71
Total	37,073 56

RECAPITULATION.

Balance available as per last report	48,511 30
Appropriation for fiscal year ending June 30, 1884	36,300 00
Total	84,811 30
Expenditures	37,073 56
Available October 1, 1883	47,737 74

The expenditures for salaries and incidental expenses during the fiscal year ending June 30, 1883, have been as follows:

Salaries	$41,049 82
Rent	1,200 00
Traveling expenses and express transportation	142 74
Fuel and lights	588 96
Stationery, books, maps, pamphlets, &c	1,569 31
Office furniture, carpets, &c	762 82
Repairs of—	
Office furniture	393 20
Heating apparatus	244 75
Telephone service	179 97
Incidental labor	191 23
Ice	82 20
Printing material	398 34
Total	46,803 34

Four volumes of Series I (VI–IX) have been issued; the index to Part I, Volume X, has been completed; the text of Volumes XII–XV has been stereotyped, and the stereotyping of Part I, Volume XVI, is nearly completed; Part II of that volume is now in the hands of the Public Printer, and the manuscript of Volumes XVII–XXI is ready for him. Moreover, the arrangement of Volumes XXII–XXXII has been determined. The latter volume will close the military operations of 1863.

The military records known as the "Hood papers" have been placed for publication at the disposition of the Government, and important contributions have been made through the War Department agency for the collection of Confederate records. These contributions embrace a confidential letter-book kept by General Robert E. Lee in 1863–'64; documents received from the legal representatives of Generals Hindman, Grimes, and Stuart, and those received from Generals Capers, Early, Gibson, Pike, and Ruggles, and from Maj. H. B. McClellan, Capt. T. A. Faries, and others.

Very respectfully, your obedient servant,

ROBERT N. SCOTT,
Brevet Lieutenant-Colonel, U. S. Army, in Charge.

To the SECRETARY OF WAR.

REPORT OF THE BOARD OF COMMISSIONERS OF THE SOLDIERS' HOME.

REPORT

OF THE

BOARD OF COMMISSIONERS OF THE SOLDIERS' HOME.

WASHINGTON, D. C., *October* 26, 1883.

SIR: Section 1 of the act of Congress, approved March 3, 1883, prescribing regulations for the Soldiers' Home, directs that the Board of Commissioners of the Home "shall every year report in writing to the Secretary of War, giving a full statement of all receipts and disbursements of money, of the manner in which the funds are invested, of any changes in the investments and the reasons therefor, of all admissions and discharges, and generally of all facts that may be necessary to a full understanding of the condition and management of the Home." In obedience thereto I have the honor to submit the following, which has been adopted by the commissioners as their report for the year ending September 30, 1883:

The Board of Commissioners of the Soldiers' Home, as constituted under the laws in force prior to March 3, 1883, consisted of the Commissary-General of Subsistence, the Adjutant-General, and the Surgeon-General of the Army. By the act of Congress above mentioned a new Board was constituted, to consist of the General-in-Chief commanding the Army, the Surgeon-General, the Commissary-General, the Adjutant-General, the Quartermaster-General, the Judge-Advocate-General, and the Governor of the Home.

March 24, 1883, the new Board of Commissioners met at the Home and organized, and since that date have met regularly as required by law. During the entire year there have been twelve regular and seventeen special meetings.

One of the first duties devolving upon the new Board was the preparation and adoption of a new set of regulations for the government of the Home, which the law just enacted made necessary. This duty was completed April 9, 1883, and the regulations having received the approval of the Secretary of War April 17, 1883, were immediately published, together with the laws relating to the Home. A copy is submitted herewith, and is made a part of this report.

The recent legislation affecting the Home has, in a great degree, removed the embarrassments existing in late years through the failure of the accounting officers of the Treasury, on account of insufficient clerical force, to make the settlements from which the revenues of the Home are derived rapidly enough to supply the funds required for current expenses. An appropriation of $10,000, made in the Act of March 3, 1883, to pay additional clerical force, has enabled the Secretary of the Treasury to advance the work sufficiently to provide the money required, and to increase in a small amount the interest-bearing fund of the Home. But it is manifest that it will be for the interests of the Home if the settlements in its favor can be brought up more rapidly.

Careful estimates have been made of the amounts which will be found due the Home when settlements for the years past shall have been completed, and there seems to be no doubt but that they will be found to aggregate at least one million five hundred thousand dollars. Of this sum the greater part is long past due, and the principal ought now to be on deposit and bearing interest in the manner provided by section 8 of the act of March 3, 1883.

The bonds and stocks held by the Home as investments have not been changed during the past year, and no purchases or sales of real estate have been made within the same period.

By an act of Congress approved December 23, 1882, the commissioners were authorized to sell a tract of land near Harrodsburg, Ky., containing about 200 acres, formerly the site of a branch Home. Proper arrangements were made in accordance with the law for the sale of the land, and it was offered at public sale on a day fixed by previous notice, but the minimum price fixed by the commissioners was not reached by the bidders, and it was withdrawn. The buildings upon the property were destroyed by fire several years ago, and the land is rented for grazing purposes, and yields a revenue of about $600 per annum, and makes it a better investment than could have been made with the money if it had been sold for the minimum price placed upon it.

April 17, 1883, I had the honor to submit to you the request of the commissioners that you would purchase, for the sum of $15,000, a small piece or parcel of land containing about 16 acres, belonging to the Home grounds in this District, but separated from the main domain by a public road, for the purposes of a soldiers' cemetery, to which a portion of it is now devoted. The commissioners at the same time, by a resolution unanimously adopted, dedicated the land to the use of the cemetery, to be transferred, with your approval, to the custody of the Quartermaster-General for c re and embellishment, reserving the right to inter therein deceased inmates of the Home or any deceased officer or soldier entitled by law to burial in a national cemetery. The extending of the cemetery proper is becoming a necessity, and the use of the ground as such will be permanent. The commissioners therefore renew their recommendations in the premises so far as to ask that you will submit the question by special request to Congress for the appropriation necessary and authority for the transfer of the land.

The facilities for the care and treatment of inmates of the Home suffering from disability do not include cases of insanity, and such cases are placed in the Government Hospital for the Insane in this District at the expense of the Home, except those entitled under section 4843 Revised Statutes, whose insanity is developed within three years after discharge from the Army. The commissioners believe that if the attention of Congress shall be called to the propriety of admitting, without expense to the Home, all persons who become insane while inmates of the Home, that it would be authorized. They therefore request that you will recommend to Congress that the Soldiers' Home in the District of Columbia be placed upon the same footing, with respect to the admission of patients to the Government Hospital for the Insane, as the National Home for Disabled Volunteers, from which all cases are received at the hospital and treated without charge, under the act approved August 7, 1882, making appropriations for the sundry civil expenses of the Government.

The property of the Home has been kept in as good repair as possible with the limited means which could be devoted to the purpose. Some

loss has been incurred by fire. March 1, 1883, a large shed, with about 90 tons of hay, from the storage of the previous summer, was burned, and on the night of July 4, 1883, the dairy barn and stables, with about 80 tons of hay, which had just been put in, were burned. Proper investigations were made, under the orders of the governor of the Home, without arriving at the origin of the fires. Advertisement was made offering a reward of $100 for information which would lead to the apprehension and conviction of a supposed incendiary. This led to the discovery that the barn had been set on fire by a former inmate of the Home, who confessed his act, and is now in jail awaiting the action of the grand jury. The barn is being rebuilt, and will cost about $4,000.

The library building, which was erected in 1877–'78, but not completed as originally designed, is now being completed by the construction of a veranda around the main portion, the cost of which will be about $1,900.

The number of men admitted to the Home during the year is 134, which is above the yearly average for the past ten years, and greater than any year, except 1877, 1878, and 1881, in the history of the Home.

The reports of the governor, the treasurer, and the attending surgeon of the Home, submitted herewith, give in detail the matters pertaining to the internal administration which it is unnecessary to repeat here. In the report of the governor, however, reference is made to statements contained in his last annual report, which was not published. In order to make complete the information designed to be given, the following is quoted from that report:

It will be observed that the number of inmates is steadily increasing. An examination of the records shows that the increase has been going on from year to year, and this increase would seem to demand an enlargement of the means of accommodation. No ill effects that I am aware of have resulted thus far from the crowded condition of the dormitories, but they are occupied to their full capacity, and any further crowding should be avoided if possible. The dining room is of capacity to seat only 340, whilst the whole number present is 471 (including those in hospital), so that it is necessary to prepare several second tables for each meal, which adds much to the labor of the attendants as well as to the inconveniences of those to be served. An extension of the dining room appears to have been projected several years ago, as indicated by the finished foundation and large amount of material on the ground. If this extension could be completed, and in such manner as to admit of sleeping apartments in the upper story, it would be a desirable improvement, would relieve the pressure now felt for more room, and, in my judgment, would be largely conducive to the comfort and health of the inmates.

INTERNAL POLICE AND DISCIPLINE.

Each floor, in both the main building and the annex, is in charge of a sergeant whose duty it is to maintain order and see that the rooms are kept in a neat and orderly condition, look after the fire-hose on his floor, so that it may be at all times ready for use, and see that the gas is economically burned and promptly extinguished when no longer required. In the performance of these duties as little restraint is placed upon the inmates as possible, the object being to allow them the utmost freedom of action consistent with the comfort of all. The messing arrangement, the cooking and the character and quantity of the food are all that could possibly be desired, and the provisions are so varied that every meal served is essentially different from that (of the same kind) which preceded it. The sleeping arrangements also are admirable, each inmate having a bed to himself, consisting of an iron bedstead, wire mattress, upon which is a hair mattress, a pair of clean linen sheets, a hair pillow with linen case, and an ample supply of excellent woolen blankets. Each room is provided with a small box containing shoe-brushes and blacking, a table with water pitcher and tumblers, and each occupant is provided with a neat box or trunk, which stands by his bed, and in which his clothes are always neatly packed. So far, indeed, as concerns the physical comfort of the inmates, their eating and their lodging, it would be very difficult to suggest anything by way of improvement. * * *

DIVINE SERVICE.

Divine service is held three times every Sunday; Catholic service in the morning, Protestant service in the afternoon and evening; all of which, but particularly the Catholic service, are well attended by as orderly, devout, and well conducted congregations as can be found in any community.

It is with regret that the commissioners record the death of two officers immediately connected with the Home since the date of the last annual report.

Maj. Milton Cogswell, brevet colonel, United States Army (retired), deputy governor of the Home, died November 20, 1882.

Brig. Gen. Charles H. Crane, Surgeon-General, United States Army, one of the Commissioners of the Home, died October 10, 1883.

These officers, in their respective positions, were devoted to the interests of the institution, and besides giving it such attention as is required for a strict discharge of duty imposed by law and orders, were at all times prompted by a natural kindness of disposition, which was possessed by both officers in more than usual degree, to seek out methods for improving the Home and increasing the comfort and happiness of the inmates.

No changes have occurred during the year in the roster of the officers of the Home except in the position of deputy governor; and those now on duty are—

Col. Samuel D. Sturgis, Seventh Cavalry (brevet major-general), governor; Lieut. Col. Anderson D. Nelson, brevet colonel, United States Army (retired), deputy governor, assigned to duty April 4, 1883, in place of Colonel Cogswell, deceased; Capt. Benjamin F. Rittenhouse, brevet major, United States Army (retired), secretary and treasurer. Capt. Calvin De Witt, assistant surgeon, United States Army, attending surgeon.

The papers accompanying this report are—

1st. A copy of the laws and regulations for the Soldiers' Home, 1883.
2d. The annual report of the governor of the Home.
3d. The annual report of the attending surgeon of the Home.
4th. The treasurer's statement of receipts and disbursements of funds.
5th. A list of names, &c., of men admitted to the Home.

I am, sir, very respectfully, your obedient servant,

W. T. SHERMAN, *General*,
President Board of Commissioners.

The Hon. SECRETARY OF WAR.

LAWS RELATING TO THE SOLDIERS' HOME.

[Revised Statutes, title lix, chapter 2.]

SEC. 4814. All soldiers of the Army of the United States, and all soldiers who have been, or may hereafter be, of the Army of the United States, and who have contributed, or may hereafter contribute, according to section forty-eight hundred and nineteen, to the support of the Soldiers' Home hereby created, and the invalid and disabled soldiers, whether regulars or volunteers, of the war of eighteen hundred and twelve, and of all subsequent wars, shall, under the restrictions and provisions which follow, be members of the Soldiers' Home, with all the rights annexed thereto. [See § 4821.]

SEC. 4815. The Commissary-General of Subsistence, the Surgeon-General, and the Adjutant-General shall constitute a board of commissioners for the Soldiers' Home,

any two of whom shall be a quorum for the transaction of business, whose duty it shall be to examine and audit the accounts of the treasurer quarter-yearly, and to visit and inspect the Soldiers' Home at least once in every month. The majority shall also have power to establish, from time to time, regulations for the general and internal direction of the institution, to be submitted to the Secretary of War for approval; and may do any other acts necessary for the government and interests of the same, as authorized by this chapter.

SEC. 4816. The officers of the Soldiers' Home shall consist of a governor, a deputy governor, and a secretary, for each separate site of the home, the latter to be also treasurer; and the officers shall be taken from the Army, and appointed or removed, from time to time, as the interests of the institution may require, by the Secretary of War, on the recommendation of the board of commissioners. [See § 1259.]

SEC. 4817. The commissioners of the Soldiers' Home, by and with the approval of the President, shall procure for immediate use, at a suitable place or places, a site or sites for the Soldiers' Home, and if the necessary buildings cannot be procured with the sites, to have the same erected, having due regard to the health of the locations, facility of access, and economy, and giving preference to such places as, with the most convenience and least cost, will accommodate the persons entitled to the benefits of the Soldiers' Home.

SEC. 4818. For the support of the Soldiers' Home the following funds are set apart, and are hereby appropriated: All stoppages or fines adjudged against soldiers by sentence of courts-martial, over and above any amount that may be due for the reimbursement of Government, or of individuals; all forfeitures on account of desertion; and all moneys belonging to the estates of deceased soldiers, which are or may be unclaimed for the period of three years subsequent to the death of such soldiers, to be repaid by the commissioners of the institution, upon the demand of the heirs or legal representatives of the deceased.

SEC. 4819. There shall be deducted from the pay of every non-commissioned officer, musician, artificer, and private of the Army of the United States the sum of twelve and a half cents per month, which sum so deducted shall, by the Pay Department of the Army, be passed to the credit of the commissioners of the Soldiers' Home. The commissioners are also authorized to receive all donations of money or property made by any person for the benefit of the institution, and hold the same for its sole and exclusive use. But the deduction of twelve and a half cents per month from the pay of non-commissioned officers, musicians, artificers, and privates of regiments of volunteers, or other corps or regiments raised for a limited period, or for a temporary purpose or purposes, shall only be made with their consent.

SEC. 4820. The fact that one to whom a pension has been granted for wounds or disability received in the military service has not contributed to the funds of the Soldiers' Home shall not preclude him from admission thereto. But all such pensioners shall surrender their pensions to the Soldiers' Home during the time they remain therein and voluntarily receive its benefits.

SEC. 4821. The following persons, members of the Soldiers' Home, according to section forty-eight hundred and fourteen, shall be entitled to the rights and benefits therein conferred, and no others:

First. Every soldier of the Army of the United States who has served, or may serve, honestly and faithfully, twenty years in the same.

Second. Every soldier and every discharged soldier, whether regular or volunteer, who has suffered, or may suffer, by reason of disease or wounds incurred in the service and in the line of his duty, rendering him incapable of further military service, if such disability was not occasioned by his own misconduct.

Third. The invalid and disabled soldiers, whether regulars or volunteers, of the war of eighteen hundred and twelve and of all subsequent wars.

SEC. 4822. The benefits of the Soldiers' Home shall not be extended to any soldier in the regular or volunteer service, convicted of felony or other disgraceful or infamous crimes of a civil nature after his admission into the service of the United States; nor shall any one who has been a deserter, mutineer, or habitual drunkard be received, without such evidence of subsequent service, good conduct, and reformation of character, as is satisfactory to the commissioners.

SEC. 4823. Any soldier admitted into the Soldiers' Home for disability who recovers his health, so as to become fit again for military service, if under fifty years of age, shall be discharged.

SEC. 4824. All persons admitted into the Soldiers' Home shall be subject to the Rules and Articles of War in the same manner as soldiers in the Army.

AN ACT prescribing regulations for the Soldiers' Home located at Washington, in the District of Columbia, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Board of Commissioners of the Soldiers' Home shall every year report in writing to the Secretary of War, giving a full statement of all receipts and disbursements of money, of the manner in which the funds are invested, of any changes in the investments, and the reasons therefor, of all admissions and discharges, and generally of all facts that may be necessary to a full understanding of the condition and management of the Home. The Secretary of War shall have power to call for and require any omitted facts which in his judgment should be stated to be added. This annual report shall be, by the Secretary of War, together with the report of the inspecting officer hereinafter provided for, transmitted to Congress at the first session thereafter, and he shall also cause the same to be published in orders to the Army, a copy thereof to be deposited in each garrison and post library.

SEC. 2. That the Inspector-General of the Army shall, in person, once in each year, thoroughly inspect the Home, its records, accounts, management, discipline, and sanitary condition, and shall report thereon in writing, together with such suggestions as he desires to make.

SEC. 3. That no new buildings shall be erected, or new grounds purchased, nor shall any expenditure of more than five thousand dollars be made until the action of the Board thereon shall be approved by the Secretary of War. All supplies that can be purchased upon contract shall be so purchased, after due notice by advertisement, of the lowest responsible bidder. Such bidder shall give bond, with proper security, for the performance of his contract.

SEC. 4. That any inmate of the Home who is receiving a pension from the Government, and who has a child, wife, or parent living, shall be entitled, by filing with the pension agent from whom he receives his money a written direction to that effect, to have his pension, or any part of it, paid to such child, wife, or parent. The pensions of all who now are or shall hereafter become inmates of the Home, except such as shall be assigned as aforesaid, shall be paid to the treasurer of the Home. The money thus derived shall not become a part of the funds of the Home, but shall be held by the treasurer in trust for the pensioner to whom it would otherwise have been paid, and such part of it as shall not sooner have been paid to him shall be paid to him on his discharge from the institution. The board of commissioners may from time to time pay over to any inmate such part of his pension money as they think best for his interest and consistent with the discipline and good order of the Home, but such pensioner shall not be entitled to demand or have the same so long as he remains an inmate of the Home. In case of the death of any pensioner, any pension money due him and remaining in the hands of the treasurer shall be paid to his legal heirs, if demand is made within three years; otherwise the same shall escheate to the Home.

SEC. 5. That a suitable uniform shall be furnished to every inmate of the Home, without cost to him.

SEC. 6. That the board of commissioners are authorized to aid persons who are entitled to admission to the Home, by outdoor relief, in such manner and to such an extent as they may deem proper; but such relief shall not exceed the average cost of maintaining an inmate of the Home.

SEC. 7. That the governor and all other officers of the Home shall be selected by the President of the United States, and the treasurer of the Home shall be required to give a bond in the penal sum of twenty thousand dollars for the faithful performance of his duty.

SEC. 8. That all funds of the Home not needed for current use, and which are not now invested in United States registered bonds, shall, as soon as received, or as soon as present investments can be converted into money without loss, be deposited in the Treasury of the United States to the credit of the Home as a permanent fund, and shall draw interest at the rate of three per centum per annum, which shall be paid quarterly to the treasurer of the Home; and the proceeds of such registered bonds, as they are paid, shall be deposited in like manner. No part of the principal sum so deposited shall be withdrawn for use except upon a resolution of the Board of Commissioners stating the necessity and approved by the Secretary of War.

SEC. 9. That no officers of the Home shall borrow any money on the credit of the Home for any purpose, nor shall any pledge of any of its property or securities for any purpose be valid.

SEC. 10. That the Board of Commissioners of the Soldiers' Home shall hereafter consist of the General-in-Chief commanding the Army, the Surgeon-General, the Commissary-General, the Adjutant-General, the Quartermaster-General, the Judge-Advocate-General, and the Governor of the Home, and the General-in-Chief shall be president of the Board, and any four of them shall constitute a quorum for the transaction of business.

SEC. 11. That all laws and parts of laws relating to the Soldiers' Home now in force and not inconsistent with this act are continued in force, and such as are inconsistent herewith are to that extent repealed.

SEC. 12. That the sum of ten thousand dollars is hereby appropriated out of any money in the Treasury not otherwise appropriated, to be expended by the Secretary of the Treasury in the employment of additional clerical force to be used in adjusting the accounts in the Treasury Department of those funds which under the law belong to the Soldiers' Home.

Approved March 3, 1883.

REGULATIONS.

ARTICLE I. The object of the "Soldiers' Home" is to provide an honorable and comfortable refuge for old and disabled soldiers of the Army who have served honestly and faithfully for twenty years, or who have been wounded in the service, or have been disabled by disease contracted in the line of their duty, so as to unfit them for rendering further military service, or for earning a competence by their own labor; and to extend charitable help to such as are entitled to the benefits of the Home but cannot reside at the Home itself.

ART. II. Applications for admission to the privileges of the Home may be made to the governor in person, or by letter addressed to the secretary of the Board of Commissioners, giving, if possible, name, dates of enlistment and discharge of each term, the number of the regiment and letter of the company with all possible data, to enable him to verify the claim, which verification or otherwise, will be indorsed on the application, and submitted to the Board of Commissioners for their final action.

ART. III. Whenever an applicant or inmate of the Home is at the same time in receipt of a pension, he will be at liberty to "direct" the whole or part thereof to be paid by the pension agent to his child, wife, or parent, if such there be living. All other pensions or parts of pensions not thus assigned, will be collected by the treasurer of the Soldiers' Home, to be held in trust for the pensioner, and will be paid him in full on discharge from the institution; and in case of his death to his legal heirs, if such there be.

ART. IV. The executive government of the institution will be in a governor, deputy governor, and treasurer; all to be selected by the President from the active or retired lists of the Army.

ART. V. The governor shall reside at the Home, have direct charge and supervision of the institution in all that pertains to discipline, good order, police, care of grounds, roads, paths, gardens, orchards, fields, fences, buildings, and stables; and shall exercise command of all officers and inmates of the Home. He will be correspondingly responsible to the Board of Commissioners, to the Secretary of War, the President, and Congress. He is authorized to permit temporary admission to the Home of personal applicants, reporting his action in each case to the Board of Commissioners on or before the first subsequent regular meeting for their final action. He will approve all estimates and expenditures by the treasurer, and may instruct him to embrace in his monthly estimates such supplies as in his judgment ought to be purchased, and such work as should be done in the interest of the persons and property committed to his charge and supervision.

ART. VI. The deputy governor will also reside at the Home, and perform such duties as the governor may prescribe, and in case of vacancy, absence or disability of the governor, his duties and responsibilities will devolve on the deputy governor, till such vacancy is filled, or such disability be removed, to the same extent and in the same manner as is usual at a military garrison, for the second in command.

ART. VII. The treasurer shall give bonds in the sum of twenty thousand dollars for the faithful discharge of his office. He shall receipt for all sums coming to the institution from the Treasury of the United States, and from every other proper source; shall keep the same in such depository as the Board of Commissioners may appoint; and will make all purchases and disbursements which the Board of Commissioners may order and approve. He shall submit to the Board at each of its monthly meetings, a true statement of all receipts and expenditures for the past month, and shall submit for their action a careful estimate of all probable receipts, and all necessary expenditures for the succeeding month. He will on the first day of October in each and every year, submit a careful statement of the general funds of the institution, with an account current for the past year, to be submitted to Congress with the Annual Report of the Board of Commissioners. He will, in fact, perform all the duties usual for the quartermaster, commissary, and post treasurer of a military post.

ART. VIII. There will be also at the Soldiers' Home a surgeon or assistant surgeon and chaplain, who shall perform all the duties incident to their office, such as are

usual at military posts, subject to the supervision of the governor of the Home; and should the governor deem further assistance necessary, he will represent the case to the Board of Commissioners, who may sanction temporarily or permanently, as the case may require, the employment of the necessary helps from inmates of the Home or from civil life.

ART. IX. Every inmate of the Soldiers' Home is entitled by law to a "suitable uniform," at the expense of the institution. This uniform will be the same or similar to what he wore while in the Army, viz, a dark-blue blouse or coatee with vest of same color, and light-blue pants, with a good hat or cap, a pair of shoes, and comfortable under-clothing. He may wear the stripes, service chevrons, or other insignia of his rank while in the military service of his country. He is entitled to good meals, a good bed, and such recreation as the Home can afford; and in consideration of good conduct the governor may allot him a dollar per month for spending money, and may pay him at the rate of twenty-five cents extra per day for such labor as he may be able and willing to perform, subject to any rules which may be approved by the Board of Commissioners. Inmates permitted by the Board to reside outside the limits of the Home may receive an allowance not to exceed eight dollars a month.

ART. X. The officers and inmates of the Soldiers' Home are subject to the "Rules and Articles of War," designed to protect the good and restrain the bad, and the governor of the Home will prepare for the approval of the Commissioners and Secretary of War, a code of regulations or by-laws for the observance of all, and post it in a conspicuous place in the Home; and he will organize the inmates into squads and companies, with a due proportion of sergeants and corporals to assist in maintaining good order and discipline, which sergeants and corporals will be paid a small compensation, to be regulated by the Board of Commissioners. There shall be two roll-calls each day, corresponding with reveille and tattoo.

ART. XI. The governor shall have power to appoint an officer of the Home to examine into any infraction of discipline that may be committed by any inmate of the Home. This officer shall make a record of his examination, stating briefly the facts and circumstances attending the same, with his conclusions, as to the guilt or innocence of the accused and submit such record to the governor for his consideration and action under the rules and regulations for the government of the Home.

ART. XII. The general supervision and financial administration of the Soldiers' Home are placed by Congress in the Board of Commissioners composed of the following officers of the Army, "ex-officio": The General-in-Chief commanding the Army, the Surgeon-General, the Commissary-General, the Adjutant-General, the Quartermaster-General, the Judge Advocate-General, and the governor of the Home—seven in all—any four of whom shall constitute a quorum. This Board will employ a secretary to keep a record of their proceedings and to prepare all reports, statements, and orders made by it, whose office will be in the city of Washington, but who, in person, will attend the Board wherever it meets.

ART. XIII. The Board of Commissioners will meet at least once a month at the Soldiers' Home, and as often as may be necessary at the room of the secretary in the War Department building, or elsewhere.

The regular meetings will be on the third Saturday of each month, and any two members may call a special meeting at any other time in the room of the secretary at the War Department, and at all meetings a quorum of four may transact any routine business not in violation of the law or of these regulations.

Due notice shall be given to each member of the Board for all regular and special meetings.

ART. XIV. The Board of Commissioners, subject to the law and superior authority, will decide all questions of finance and administration; will revise all estimates and order all expenditures; will audit all accounts, call for all reports to enable them to maintain an absolute control of the institution, and to respond to higher authority; will decide all applications for admission to the privileges of the Home, and entertain all appeals from officers or inmates of the same for redress.

ART. XV. The Board of Commissioners will determine what laborers or servants may be employed at the Home, and fix their rates of compensation, and they will, from time to time, make to the President, through the Secretary of War, such recommendations for the removal or appointment of officers of the Home as from their opportunities they believe will better insure the harmonious and economical workings of the establishment. The Board will approve and order the purchase of the necessary supplies as they may be needed, but will order no purchase of land, or the erection of any building, or any expenditure of more than five thousand dollars without the previous sanction of the Secretary of War. The Board will also prescribe what supplies shall be purchased by contract after due notice by advertisement, and what in open market. They shall examine the estimates and make the appropriations for current expenses from month to month, and examine and audit the accounts of the Treasurer at least quarter-yearly; and at their meeting in October will make an annual report of their proceedings to the Secretary of War, for the information of Congress.

These regulations are instituted to replace those adopted January 31, 1883, heretofore in force.

Adopted by the Board of Commissioners of the Soldiers' Home, at a session held at Washington City, D. C., April 9, 1883.

Commissioners of the Soldiers' Home:

W. T. SHERMAN,
General, and President of the Board.
R. MACFEELY,
Commissary-General of Subsistence, U. S. A.
R. C. DRUM,
Adjutant-General, U. S. A.
D. G. SWAIM,
Judge-Advocate-General, U. S. A.
RUFUS INGALLS,
Quartermaster-General, U. S. A.
C. H. CRANE,
Surgeon-General, U. S. A.
S. D. STURGIS,
Colonel Seventh Cavalry, Bvt. Maj. Gen. U. S. A., Governor of the Home.

WAR DEPARTMENT,
Washington City, April 17, 1883.

The foregoing regulations are approved and established for the government of the Soldiers' Home.

ROBERT T. LINCOLN,
Secretary of War.

SOLDIERS' HOME,
(Near) WASHINGTON, D. C.,
October 1, 1883.

SIR: I have the honor to submit the following annual report of the affairs of the Soldiers' Home:

Number of regular inmates on the rolls September 30, 1882	610	
Number of admissions to September 30, 1883	134	
Number of readmissions to September 30, 1883	64	
		808
Dropped by withdrawal, absent without leave, and transfer to insane asylum	154	
Number suspended	10	
Number dismissed	1	
Number deserted	6	
Number died	35	
Number dropped from O. C.* by order of the Board	5	
		211
On rolls September 30, 1883		597

TEMPORARY INMATES.

Number receiving the benefits of the Home September 30, 1882	13	
Number admitted during the year	36	
		49
Number dropped, including those transferred to regular	38	
Number died	1	
Number discharged	2	
		41
Number receiving benefits of Home September 30, 1883		8
Total number present and absent on the rolls September 30, 1882		605

* Outdoor relief.

Of the 35 deaths reported, 4 were members living with their families and drawing an allowance in money from the funds of the Home, and 2 on furlough.

The whole number on the rolls receiving commutation September 30, 1883, was 152.

It will be observed that there has been a decrease in the number of inmates since my last report, which at first sight might appear to contradict the theory of a steady increase in numbers, as advanced in that report, and thus tend to weaken in some degree the recommendations there made for increased means of accommodation. But this slight decrease is only temporary, and the result of the operation of the late laws and regulations regarding pensions.

Those short-sighted and thriftless inmates who preferred taking their chances with the world with their pension money in their hands withdrew from the Home rather than see their pension turned over to the treasurer; but the subsequent abject condition of most of these has deterred others from following their example, so that no further decrease is likely to occur from these causes.

INTERNAL POLICE AND DISCIPLINE.

This subject was treated so fully and so much in detail in my report of last year, that to go over it again would be a matter of mere supererogation. It may suffice, therefore, to say that both the internal police and the discipline are all that could be hoped for, and very satisfactory.

DIVINE SERVICE.

No change having occurred under this head since my last report, I would beg to refer to that report for any desired information on that subject.

BUILDINGS.

The library building is now undergoing completion in accordance with the recommendations in my last report, and it is hoped that it will be finished before the cold weather sets in.

The officers' quarters have been painted and their plumbing overhauled and placed in a thoroughly good sanitary condition.

The hospital is now undergoing repairs, which will soon be completed, and which will render, it is hoped, any further repair unnecessary for a long time.

GARDENS AND GROUNDS.

For detailed information on these subjects I beg to refer again to my last annual report. The gardens and grounds are in good condition. The yield of small fruits, berries, &c., was ample for all the purposes of the institution, so that everybody connected with the Home had an abundant supply of strawberries, cherries, currants, raspberries, blackberries, pears, and grapes. The peach orchard, however, does not seem to thrive well, but from the trimming and work generally bestowed upon it during the past year, the gardener is hopeful that a good yield may be expected next year.

The high stone wall inclosing a large portion of the grounds has been placed in thorough repair and painted, and it is hoped that no further outlay will be required in this direction for many years.

DAIRY.

In my last report the details of this department were gone into at length, and a change in the breed of cows was recommended, in the hope that a sufficient supply of milk might be secured without additional expense. This change has been effected, and the quantity of milk so increased that every member of the Home has an ample supply.

The dairy stable (or barn) was destroyed by fire on the night of July 4, 1883, the work of an incendiary. Fortunately the cattle were saved, but the hay stored in the barn, amounting to about eighty tons, was destroyed. A new stable (or barn) is in course of erection, and will be ready for use before the cold weather sets in.

FARMING.

The whole number of acres under cultivation is about sixty, upon which has been raised the past season an abundant supply of vegetables for all the purposes of the Home, consisting of—

Asparagus	bushels..	50
Rhubarb	bunches..	2,000
String-beans	bushels..	150
Pease	do....	125
Cucumbers	do....	50
Squash (summer)	do....	100
Ochre	do....	30
Lettuce	heads..	3,000
Corn	dozen..	400
Radishes	bushels..	30
Kale	do....	100
Cabbage	heads..	25,000
White potatoes	bushels..	4,600
Sweet potatoes	do....	400
Lima beans	do....	50
Tomatoes	do....	400
Parsnips	do....	300
Salsify	do....	75
Carrots	do....	250
Beets	do....	1,000
Winter squash		3,000
Sweet Spanish peppers	bushels..	30
Egg-plants		500
Stalk celery		3,000
Spinach	bushels..	150
Turnips	do....	1,200
Onions	do....	250
Onion sets	do....	45

The yield of hay on the whole place amounted to 312 tons.

For further details of the repairs and improvements, and their cost, and for information regarding the hospital and sanitary condition of the Home, I would respectfully refer to the reports of the secretary and treasurer and the medical officer, respectively.

I am, sir, very respectfully, your obedient servant,

S. D. STURGIS,
Brevet Major-General, United States Army,
Governor.

General W. T. SHERMAN, U. S. A.,
President of Board of Commissioners, &c.,
Washington, D. C.

UNITED STATES SOLDIERS' HOME, D. C.,
September 30, 1883.

SIR: I have the honor to submit a report of the medical department of the Home during the year ending September 30, 1883:

Number of patients remaining in hospital September 30, 1882	78
Number of patients admitted during the year	247
Total	325

For comparison with the above—

Number of patients admitted during the year ending September 30, 1882	240
Number of patients admitted during the year ending September 30, 1881	221

During the year there were—

Returned from hospital to the Home relieved or recovered	186
Discharged from the hospital (returned to friends, &c.), and dismissed	22
Deserted from hospital (left without notice)	4
Sent from hospital to Government Hospital for Insane	3
Died in hospital	29
Died out of hospital	3
Remaining in hospital September 30, 1883	78
Total	325

CAUSES OF DEATHS.

Apoplexy	5
Aneurism (arch of aorta)	1
Cancer of axilla and neck	1
Cancer of rectum	2
Cancer of stomach	1
Diarrhœa, chronic	1
Diabetes mellitus	1
Drowned	1
Gastritis, acute	1
Heart, paralysis of	1
Meningitis, chronic	1
Pneumonia	7
Phthisis pulmonalis	7
Suicide	1
Tumor of cerebrum, with softening	1

AGE OF THOSE WHO DIED.

Between 30 years and 40 years	3
Between 40 years and 50 years	6
Between 50 years and 60 years	15
Between 60 years and 70 years	3
Between 70 years and 80 years	4
Between 80 years and 90 years	1

NATIVITY OF THOSE WHO DIED.

United States	8
England	1
Ireland	15
France	1
Germany	6
Denmark	1
Total	32

For comparison—

Deaths during year ending September 30, 1882	27
Deaths during year ending September 30, 1881	40

The deaths have been limited in great degree to the aged and infirm, and to the victims of incurable diseases, notably phthisis pulmonalis and cancer. The increased mortality over last year (five) was caused principally by pneumonia, which was fatal in the majority attacked, and especially in old men; in those who had con-

fessedly been all their adult lives hard and constant drinkers of spirits, and those whose vitality had been lowered by some severe and exhausting disease; in these cases this disease was rapid in its course and very fatal.

Appended and marked A is a tabulated statement (made in conformity with nosological table, form 44, from office of the Surgeon-General, United States Army) of diseases for which patients were admitted and treated in the hospital. On admission the name of each man is entered in a register of patients, together with the disease from which he is suffering at the time, although there may be in his case one or more existing ailments (generally chronic). It also frequently occurs that when convalescing from the sickness for which he was admitted, and before he is well enough to return to the Home building, a patient may be attacked with some new form of disease. An entry of this is not made in the register unless it should prove fatal, when it is placed in the column of "remarks" as well as in the "record of deaths." It thus happens that all the cases of individual diseases treated are not and cannot well be reported in the table.

The very small number of acute intestinal diseases, such as diarrhœa, dysentery, cholera morbus, &c., reported is noteworthy, especially in a year when the vegetables from the garden have been so abundant, and issued to and eaten by the inmates of the Home and hospital so freely. In my opinion this is due to their freshness, being plucked in the morning and prepared for the table as soon afterwards as possible, rendering them not only safe but of positive hygienic value. I do not think an equal quantity could have been purchased without having some old and stale among them, a mixture which would, without doubt, have resulted injuriously to the inmates.

Six thousand one hundred and seventy persons presented themselves at morning sick-call or were treated in quarters, including officers and their families, inmates, servants, and citizen employés entitled to attendance and medicines. The number treated last year was 5,929.

The number of admissions to hospital for intemperance last year was 62; this year 55; a decrease of 7.

The greatest number of patients in hospital at any one time was 82. The smallest number of patients in hospital at any one time was 65. The average number of patients in hospital for each day in the year was 75. (The average number of patients in hospital each day of last year was 74.5.)

It will be seen from this statement that the hospital (originally erected for 50 patients) has been well filled at all seasons, and sometimes crowded; that is, every bed that could be placed in all available space was occupied. Eighty-three patients is the maximum number that can be accommodated at one time, and only for a day or two without overcrowding. The system of ventilation, of water supply, and of sewerage, and the apparatus for heating, have all answered to the increased demands made upon them. The appliances for preparing the food have also been sufficient. The serving of the food has been more difficult, it being necessary, from the size of the mess-room, to set the tables twice for each meal.

If the cases admitted were acute only the accommodations would be ample, but the Home being the refuge of men who have been maimed, injured in the service, broken down by exposure incident to their duty, and victims of disease, many must be received into the hospital not so much for medical treatment as for the diet and for the convenience and comforts which such a building affords. All require more or less attention, and some are so helpless as to demand constant attendance.

To accommodate the sick, in winter especially, it has been at times necessary to return to the Home some of the chronic cases to whom the quiet and conveniences of the hospital are great comforts. Care has been exercised, so that no hardship has resulted in any instance. Could a building be set apart as an infirmary it would be a great boon to many of these men now in hospital; to aged men; to others enfeebled by disease or who have been maimed by wounds and injuries, and to those who, from pride or superstition, are averse to going into hospital, but all of whom could go to meals, especially if conveniences could be given them, as water-closets accessible without exposure, and a few attendants could be provided to give personal assistance and insure cleanliness and order. This would afford them the quiet they desire, and relieve the hospital and the Home, and prevent for a long time an enlargement of hospital accommodations, which will be necessary should the number of inmates increase.

The effort has been to have the diet of the hospital abundant and varied, to suit the requirements, tastes, and wishes of the sick, and to have it prepared and served in a neat and cleanly manner. To secure this frequent inspections have been made of the food received, before and after preparation; personal attention has been given, and inquiries have been made of the more intelligent patients and attendants, having reference to the quality and quantity, and its preparation. A weekly table is kept, showing the articles served at every meal on every day, and also a list of those who receive articles of extra diet, and what is given them. This is revised constantly, so that the smallest quantities required may be found out and economy in purchasing exercised.

Eggs have been freely used, and an abundance of fresh and sweet milk has been received daily from the Home dairy. These have been issued not only to the sick and feeble, but to the aged and infirm men who cannot eat meat. The meat, bread, and groceries received have been excellent throughout.

I append tables (marked B and C) showing full diet for one week in summer and one in winter, and a list of quantities of some articles used during the year.

During the year 11,500 prescriptions have been prepared in the hospital dispensary, and preparations have been made which, before a druggist was authorized, were purchased. The cost of medicines, &c., for the year was $1,481.67. For the year ending September 30, 1882, $1,838.94; a difference in favor of the past year of $357.27, or $177.27 more than the pay of the druggist, who is given $15 per month.

The total cost of the hospital for the year is shown in the tabular statement appended and marked D. The average daily number of persons (patients and attendants) living in the building was 102.5. The expenses, everything included that can properly be charged, were $25,720.33, making the cost for each man per day 68.48 cents. Last year the total expense was $24,595.74; for each man per day, 68.50 cents.

I believe this is a fair exhibit of the cost of running the hospital, and as nearly correct as it is possible to estimate it. The table is so arranged that each item of expense—subsistence, medicines, nursing, light, &c.—is presented separately. The cost of each month, the total for the year, and the cost per man per day for each item are shown. The last column of the table is the total of a similar statement submitted last year (1882).

Two thousand and ninety dollars and thirty-three cents have been expended in repair of the hospital building. It is at present in good condition. New asphalt has been laid in the basement. The hot-water heating apparatus has been put in excellent order. The roof, which was badly corroded by rust, has been in part repaired (this work is in progress), and some much needed painting of the interior has been finished.

The liberality of the authorities of the Home in supplying me with all articles I have required has enabled me to keep the hospital building in order, to administer its affairs without embarrassment, and to the best of my ability do justice to the inmates who have come under my care.

The character and discipline of the attendants have improved; they are attentive to their duties, so that the nursing of the sick and other duties required are performed satisfactorily.

Dr. Clifton Mayfield, physician resident in the hospital, has attended to all duty required of him with intelligence, and by his kindness has won the confidence of the patients. He has been skillful and successful in emergencies, and his aid has been valuable.

Hospital Steward W. B. Young, U. S. Army, has continued in charge of the property, the detail and discipline of the attendants, and other administrative duties. He has maintained his character for capability and trustworthiness.

I am, very respectfully, your obedient servant,

CALVIN DE WITT,
Assistant Surgeon, United States Army,
, Attending Surgeon.

The GOVERNOR OF THE HOME.

A.—*Tabulated statement of diseases for which patients were admitted into hospital at United States Soldiers' Home, District of Columbia, during the year ending September 30, 1883.*

Disease.	No.	Disease.	No.
Remittent fever	3	Pneumonia, acute	11
Intermittent fever, quotidian	1	Pleuritis, acute	1
Intermittent fever, tertian	4	Colic	1
Diarrhœa, acute	4	Constipation	1
Diarrhœa, chronic	2	Cholera morbus	2
Dysentery, acute	1	Dyspepsia	4
Erysipelas	1	Gastritis, acute	3
Tonsilitis, acute	1	Hernia, inguinal	2
Pyæmia	1	Scald	1
Insomnia	1	Contusions	7
Apoplexy	2	Sprain, recent	1
Convulsions	1	Bladder, acute inflammation of	2
Epilepsy	1	Bladder, chronic inflammation of	4
Insanity	4	Bladder, atony of	1
Spinal meningitis	1	Orchitis	3
Neuralgia	3	Hydrocele	1
Paralysis	4	Abscess	3
Locomotor ataxia	1	Boils	1
Conjunctivitis	2	Ulcers	3
Iritis	1	Skin disease, eczema	1
Corneal ulcer	1	Skin disease, herpes zoster	1
Blindness, total, from gunshot wound	1	Skin disease, rhus poisoning	1
Deafness	1	Amputation, old, of leg	1
Prolapsus ani	1	Amputation, old, of arm	3
Fistula in ano	1	Diagnosis undetermined	1
Diabetes mellitus	1	Sprain, old	1
Syphilis, primary	2	Fracture of radius, simple	1
Syphilis, constitutional	3	Gunshot wound, old, thigh	1
Urethra, stricture of	2	Gunshot wound, old, thorax	1
Inebriation	51	Gunshot wound, old, ankle (entries of same case)	3
Delirium tremens	4	Wounds, lacerated	1
Rheumatism, acute	7	Wounds, incised	2
Rheumatism, chronic	17	Suicide	1
Epitheliama	1	Drowning	1
Tumor, cystic	1	Debility from old age	8
Consumption	13	Amputation of thigh	1
Heart, valvular disease of	4	Amputation, old, of both feet, left hand, and right finger:s	1
Asthma	3		
Catarrh	5	Total	247
Bronchitis, acute	2		
Bronchitis, chronic	5		
Laryngitis, acute	1		

NOTE.—The nosological table (Form 44) issued from the office of the Surgeon-General, U. S. A., has been followed as closely as possible in the above statement.

B.—*Statement showing full diet for one week in summer and one in winter.*

JANUARY, 1883.

	Sunday, 14.	Monday, 15.	Tuesday, 16.	Wednesday, 17.	Thursday, 18.	Friday, 19.	Saturday, 20.
Breakfast	Beefsteak. Potatoes. Bread. Butter. Coffee.	Bacon. Potatoes. Bread. Butter. Coffee.	Hash. Bread. Butter. Coffee.	Beefsteak. Potatoes. Beets. Bread. Butter. Coffee.	Hash. Bread. Butter. Coffee.	Beefsteak. Potatoes. Bread. Butter. Coffee.	Hash. Bread. Butter. Coffee.
Dinner	Corned beef. Potatoes. Beets. Parsnips. Pudding. Bread. Butter. Tea.	Mutton stew. Vegetable soup. Potatoes. Beets. Bread. Butter. Tea.	Roast beef. Potatoes. Beets. Bread. Tea.	Mutton stew. Vegetable soup. Potatoes. Beets. Bread. Coffee.	Roast beef. Potatoes. Bread. Tea.	Roast beef. Codfish. Potatoes. Turnips. Vegetable soup. Bread.	Bacon. Potatoes. Parsnips. Beets. Bread. Tea.
Supper	Cheese. Sirup. Crackers. Bread. Butter. Tea.	Prunes. Sirup. Bread. Butter. Tea.	Stewed peaches. Sirup. Cold beef. Bread. Butter. Tea.	Stewed apples. Sirup. Bread. Butter. Tea.	Cheese. Sirup. Crackers. Bread. Butter. Tea.	Stewed peaches. Sirup. Bread. Butter. Cold beef. Tea.	Stewed prunes. Bacon. Sirup. Bread. Butter. Tea.

B.—*Statement showing full diet for one week in summer and one in winter*—Continued.

JULY, 1883.

	Sunday, 22.	Monday, 23.	Tuesday, 24.	Wednesday, 25.	Thursday, 26.	Friday, 27.	Saturday, 28.
Breakfast.....	Beefsteak. Fried ham. Potatoes. Bread. Butter. Coffee.	Bacon, fried. Potatoes. Bread. Butter. Coffee.	Hash. Bread. Butter. Coffee.	Beef steak. Bread. Butter. Coffee.	Beef stew. Bread. Butter. Coffee.	Beef steak. Potatoes. Bread. Butter. Coffee.	Hash. Bread. Potatoes. Butter. Coffee.
Dinner.....	Corned beef. Cabbage. Potatoes. Tomatoes. Bread, Butter. Pudding.	Vegetable soup. Roast mutton. Egg-plant. Tomatoes. Potatoes. Bread. Butter.	Roast Beef. Squash. Potatoes. Tomatoes. Butter. Bread. Tea.	Irish stew. Milk. Potatoes. Bread. Butter	Roast beef. Egg-plant. Tomatoes. Potatoes. Bread. Butter. Milk.	Roast beef. Egg-plant. Vegetable soup. Potatoes. Tomatoes. Milk.	Bacon. Bean soup. Egg-plant. Potatoes. Squash. Milk.
Supper.....	Cold meat. Cheese. Crackers. Cucumbers. Bread. Sirup. Tea.	Stewed prunes. Sirup. Butter. Bread. Tea.	Cold beef. Apples. Sirup. Bread. Butter. Tea.	Cheese. Apples. Peaches. Bread. Butter. Sirup. Tea.	Cold beef. Cucumbers. Prunes. Peaches. Sirup. Butter. Bread. Tea.	Cold beef. Prunes. Sirup. Butter. Bread. Tea.	Stewed apples. Butter. Bread. Tea.

C.—*Amount of stimulants and some of the articles of food used in Barnes Hospital during the year ending September* 30, 1883.

Articles.	Amount.	Articles.	Amount.
Beef.....pounds..	18,120	Chicken .....number..	197
Butter .....do....	3,758	Oysters ..... quarts..	166
Coffee .....do....	2,852	Milk ..... gallons..	6,006
Sugar .....do....	5,563	Whisky .....do....	91
Mutton .....do...	7,150	Wine.....do....	58
Dried apples .....do....	225	Brandy..... .....do	15
Dried peaches.....do....	310	Porter .....bottles..	84
Prunes .....do....	345	Corn starch .....pounds..	81
Cheese .....do....	870	Tapioca .....do....	190
Eggs.....dozen..	2,650	Farina .....do....	25
Ham .....pounds..	963	Potatoes .....bushels..	676
Turkey.....do....	210	Onions .....do....	71

REMARKS.—Beef, 3 times weekly; mutton, twice weekly; bacon, once weekly; corned beef, once weekly; codfish, every Friday.

	1882.			1883.									Total.	Per man per day.	Totals of year 1882.	Remarks.
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.				
Average number of men	101	102	105	104	107	107	104	104	98	98	97	102	.....	102½	100	
														Cents.		
Subsistence	34.43	31.73	30.44	28.05	26.09	27.88	29.16	29.39	31.40	28.61	30.01	28.80	$11,440 07	30.58	$10,090 00	Includes full and extra diet and stimulants.
Medicines, &c	137.70	93.63	134.40	142.58	102.03	149.05	134.11	100.48	146.38	125.75	126.51	88.95	1,481 57	3.97	1,838 91	Medicines, surgical dressings, and instruments.
Attendance	325.00	325.00	325.00	350.00	350.00	350.00	350.00	350.00	350.00	350.00	350.00	350.00	4,125 00	11.02	3,720 00	All attendants and employés, proportion of pay of home mechanics.
Fuel	.....	1,506 80	.....	.....	.....	350.00	.....	.....	.....	.....	.....	.....	1,856 80	4.95	1,710 00	All fuel, and for all purposes.
Light	43.75	64.75	89.25	91.00	68.25	56.00	50.75	36.75	15.75	16.50	22.50	45.00	600 25	1.60	624 00	Gas.
Laundry	50.50	51.00	52.50	62.40	64.20	62.20	62.40	62.40	58.50	58.80	58.20	61.20	704 30	1.88	1,380 00	Laundry work of all kinds.
Clothing	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,800 00	4.80	2,167 00	Issued to patients and attendants.
Furniture	.....	.....	89.94	31.03	61.77	.....	82.20	43.91	128.20	.....	30.00	15.30	482 35	1.28	1,042 00	For kitchen, dining room, and repair to that of wards.
Stationery	.....	15.50	.....	1.00	2.50	.....	.....	4.10	.....	29.85	.....	.....	52 95		41 30	
Coffins and trimmings	30.00	.....	.....	20.00	77.96	.....	.....	.....	.....	.....	.....	31.50	159 46		294 00	
Teeth and spectacles	.....	.....	.....	.....	7.50	.....	.....	1.25	2.50	.....	2.50	.....	13 75		93 00	
Excavations	.....	.....	.....	.....	.....	15.00	.....	.....	15.00	.....	.....	15.00	45 00	1.00	150 00	Emptying hospital cess-pools.
Newspapers	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	90 00		90 00	For use of hospital attendants and patients in reading-room.
Postage	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	18 00		.....	
Bedding	246.75	401.75	.....	.....	.....	.....	.....	.....	112.00	.....	.....	.....	760 50	2.05	708 00	Blankets, pillow cases, pillows, slippers, &c.
Repairs	.....	71.85	103.42	34.00	6.00	51.00	23.90	810.00	110.93	538.09	60.14	281.00	2,090 33	5.26	677 00	Painting, heating apparatus, roof, carpenter work, and materials used by home mechanics.
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	25,720 33	68.48	24,595 74	

Cost per man per day for year ending September 30, 1883..... 68.48 cents.
Cost per man per day for year ending September 30, 1882..... 68.50 cents.

TREASURER'S STATEMENT OF RECEIPTS AND DISBURSEMENTS.

Annual statement of receipts and expenditures made on account of the United States Soldiers' Home, District of Columbia, from October 1, 1882, to September 30, 1883, by Brevet Maj. B. F. Rittenhouse, U. S. A., secretary and treasurer.

Receipts on account of—	During what period.												Total.
	1882.			1883.									
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	
Contributions from pay of soldiers, fines, stoppages against enlisted men, and pay forfeited by desertion (secs. 4818 and 4819, Revised Statutes)	$8,960 95	$5,839 98	$3,787 34	$6,279 66	.....	$11,796 05	.....	.....	.....	.....	.....	.....	$36,663 98
Effects of deceased soldiers, subject to the demand of legal heirs (sec. 4818, Revised Statutes)	.....	21,290 95	.....	6,271 52	.....	.....	.....	.....	.....	.....	.....	.....	27,562 47
Appropriations by the Board of Commissioners for current expenses	.....	.....	.....	.....	.....	.....	.....	.....	$15,129 66	.....	$9,000 00	$10,000 00	34,129 66
Interest on bonds and securities held as investments	7,800 00	.....	7,800 00	1,200 00	.....	7,800 00	.....	.....	.....	$9,000 00	.....	7,800 00	41,400 00
Pensions relinquished (acts of March 3, 1851, and March 3, 1859, sec. 4820, Revised Statutes)	.....	.....	199 00	.....	.....	409 27	.....	.....	.....	.....	.....	.....	608 27
Effects of deceased inmates, subject to the demand of legal heirs	.....	.....	.....	390 75	.....	133 62	.....	.....	.....	.....	31 50	.....	555 87
Sale of farm stock and products, rent of Harrodsburg property, and from miscellaneous sources	11 00	49 27	1,182 63	258 73	$119 01	83 27	$96 00	$34 00	$18 75	160 22	71 70	30 67	2,115 25
Total	16,771 95	27,180 20	12,968 97	14,400 66	119 01	20,222 21	96 00	34 00	15,148 41	9,160 22	9,103 20	17,830 67	143,035 50

Annual statement of receipts and expenditures, &c.—Continued.

Expenditures on account of—	During what period.												Total.
	1882.			1883.									
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	
Furniture for officers' quarters							$4 05		$37 11	$841 21	$372 70	$120 00	$1,375 07
Compensation to treasurer of the Home fund and secretary to the Board of Commissioners	$175 00	$175 00	$175 00	$175 00	$175 00	$175 00	175 00	$175 00	175 00	175 00	175 00	175 00	2,100 00
Transportation of inmates							2 00						2 00
Expenses of the hospital for artificial teeth, spectacles, crutches, room, mess and kitchen furniture (bedding, provisions, and fuel excepted)	689 57	268 72	185 36	145 67	142 77	99 58	171 15	240 16	355 05	471 55	86 40	97 50	2,953 48
Expenses of hospital for medicines and medical stores and material for coffins	362 25	354 68	210 40	162 58	179 99	149 05	134 11	100 48	146 38	125 75	126 51	120 45	2,172 63
Claims of heirs of deceased soldiers		5 72	29 04						25 26				60 02
Commutation to members of the Home permitted to reside with their families	1,344 00	84 00	2,915 40	224 80	80 00	2,624 00	364 00	96 00	3,038 00	122 00	110 00	2,946 00	13,948 20
Subsistence stores and extra hospital diet	3,181 38	5,805 29	3,598 74	3,452 22	2,851 52	3,508 77	2,965 54	3,677 54	3,175 58	2,901 24	2,855 23	2,784 08	40,757 13
Clothing for inmates		3,864 95		67 52				250 00	4,414 06				8,596 53
Bedding for inmates	100 00	401 25		7 16		123 60		410 35					1,042 36
Fuel		5,867 40						346 28	230 75		7 00	99 00	6,550 43
All kinds of mess and kitchen furniture for the Home		75 87	10 12	164 15		157 27		120 54	84 59	125 11	14 00	4 25	755 90
Pay of civilian laborers, mechanics, farm and garden hands and other employés; hire of teams, expenses of green-house, garden, and improvement of grounds; implements, seeds, and fertilizers	1,309 61	1,239 01	2,249 20	1,072 25	1,054 65	1,824 15	1,264 47	1,436 32	2,351 99	1,508 60	1,307 57	1,383 99	18,001 81
Forage for the Home animals, straw for bedding for the inmates, and medicines for the animals	120 97	239 77	162 86	156 17	150 73	184 41	320 28	206 21	177 97	74 65	118 07	97 26	2,009 35
Gas and gas-fixtures, and furnaces	162 92	503 82	410 54	346 12	236 77	190 22	190 75	161 00	380 54	96 75	117 90	320 40	3,117 73
Buildings and general repairs and material for same; main building, hospital, officers' quarters, and material not charged elsewhere	294 43	240 06	369 75	105 94	404 76	41 12	198 01	1,982 69	1,690 07	1,939 27	1,451 13	1,598 63	10,315 86

Annual statement of receipts and expenditures, &c.—Continued.

Expenditures on account of—	During what period.												Total.
	1882.			1883.									
	October.	November.	December.	January.	February.	March.	April.	May	June.	July.	August.	September.	
Expenses of library, governor's and treasurer's offices, books, periodicals, newspapers, book-binding, stationery, and printing	.....	.....	$135 44	$7 40	$79 64	$331 46	.....	$35 80	$45 75	$37 50	.....	$52 50	$725 49
Extra duty and monthly allowances to inmates	$25 00	$1,991 65	2,033 10	.....	2,081 45	.....	$2,121 20	.....	2,435 50	.....	$2,527 50	.....	13,215 40
Religious services and church expenses	150 00	150 00	150 00	150 00	150 00	150 00	150 00	150 00	150 00	150 00	150 00	150 00	1,800 00
Farm stock, carts, horses, mules, plows, harness, and cattle	31 09	.....	.....	.....	1,180 00	1,218 75	66 98	23 80	1,731 25	12 50	3 00	.....	4,267 37
Laundry work	235 00	473 50	241 00	289 80	291 60	288 60	294 60	290 40	280 20	274 20	270 00	263 40	3,492 30
Support of insane members at asylums	130 00	.....	130 00	.....	.....	.....	18 57	.....	.....	65 00	.....	65 00	408 57
Professional services, attorneys' fees, rent of safes, freight, postage, hack-hire, and other incidental expenses, removing night soil	82 76	183 48	132 31	186 20	157 92	107 77	284 04	304 95	223 63	49 90	94 50	82 54	1,890 00
Total	8,393 98	21,924 17	13,138 26	6,712 98	9,216 80	11,173 75	8,724 75	10,007 52	21,148 68	8,970 23	9,786 51	10,360 00	139,557 63

Average cost of the ration per month, $7.8221.
Average cost of the ration per day, .25646.

RECAPITULATION.

RECEIPTS.		
n hand September 30, 1883	$8,652 37	
ontributions from pay of soldiers, &c	36,663 98	
ffects of deceased soldiers, &c	27,562 47	
rom United States Treasurer	34,129 66	
nterest on stocks and bonds	41,400 00	
ensions relinquished by inmates	608 27	
ffects of deceased inmates	555 87	
les, rent, and miscellaneous	2,115 25	
Total		$151,667 87
EXPENDITURES.		
rniture for officers' quarters	1,375 07	
mpensation to treasurer, &c	2,100 00	
ransportation of inmates	2 00	
xpenses of the hospital for artificial teeth, &c	2,953 48	
xpenses of the hospital for medicines, &c	2,172 63	
efunded to claimants as heirs of deceased soldiers	60 02	
mmutation to members of the Home, &c	13,948 20	
ubsistence stores and extra hospital diet	40,757 13	
othing for inmates	8,596 53	
dding for inmates	1,042 36	
uel	6,550 43	
ess and kitchen furniture for the Home	755 90	
ay of civilian laborers, mechanics, &c., seeds, fertilizers, &c	18,001 81	
orage of the Home animals, medicine, &c	2,009 35	
as and gas-fixtures, and furnaces	3,117 73	
uilding and general repairs, &c	10,315 86	
xpenses of library, &c	725 49	
xtra duty and monthly allowance	13,215 40	
eligious services and expenses of choirs, &c	1,800 00	
arm stock, &c	4,267 37	
undry work	3,492 30	
upport of insane members at asylums	408 57	
ofessional services, attorneys' fees, &c	1,890 00	
Total		139,557 63
Balance on hand September 30, 1883		12,130 24

tatement of funds placed to the credit of the United States Soldiers' Home, District of Columbia, in the United States Treasury since March 3, 1883.

eposited from March 3 to September 30, 1883		$171,134 17
ithdrawn since March 3, 1883		34,129 66
Balance, September 30, 1883		137,004 51
crued interest, at 3 per cent. per annum, on permanent fund since March 3, 1883	$937 86	
ess interest deducted on account of funds withdrawn	38 62	
		899 24
Total amount of funds in United States Treasury September 30, 1883.		137,903 75

mparative statement of moneys received and disbursed on account of the United States Soldiers' Home, District of Columbia.

eceived from October 1, 1881, to September 30, 1882	$145,932 13
eceived from October 1, 1882, to September 30, 1883	143,035 50
xpended from October 1, 1881, to September 30, 1882	142,889 60
xpended from October 1, 1882, to September 30, 1883	139,557 63

Average number of inmates receiving the benefits of the Home during the year..	472
Number receiving $8 per month, residing with their families	135
Number receiving $4 per month, residing with their families	9
Number receiving $2 per month, residing with their families	4
Number receiving $2.66⅔ per month, residing with their families	1

INVESTMENTS.

United States 4 per cent. bonds	$780,000
Missouri bonds (6 per cent.)	40,000
Stock of the Young Men's Christian Association Joint Stock Company	62,500

I certify, on honor, that the above statement exhibits a true and accurate account of the funds of the Soldiers' Home, and the receipts and expenditures for the yea ending September 30, 1883.

B. F. RITTENHOUSE,
Brevet Major, U. S. Army,
Secretary and Treasurer.

of names, &c., of men admitted to the benefits of the Soldiers' Home, near Washington, D. C., during the year ending September 30, 1883.

No.	Names.	Last served in—		Service.		Age when admitted.	Date admitted.	Entitled by—
		Co.	Regiment.	Years.	Months.			
1	Morris Geld	.....	Mounted service	18	1½	38	Oct. 4, 1882	Disability.
2	George H. McNeil	.....	General service	17	4½	38	Oct. 4, 1882	Do.
3	Hugh Moloney	F	Second Infantry	18	3 7/8	61	Oct. 5, 1882	Do.
4	John Griffith	A	Thirteenth Infantry	17	4 5/8	38	Oct. 15, 1882	Do.
5	Charles Meinart	I	Seventh Infantry	15	5/8	52	Oct. 18, 1882	Do.
6	John McHale	.....	Commissary sergeant	20	10 7/8	50	Oct. 22, 1882	Service.
7	James Curry	G	Second Artillery	20	4½	43	Oct. 22, 1882	Do.
8	Wm. J. Campbell	G	Twenty-second Infantry	3	11½	33	Oct. 26, 1882	Disability.
9	Thomas Moran	I	Eighth Infantry	14	7½	38	Oct. 27, 1882	Do.
10	John Drewe	G	Thirteenth Infantry	1	3½	22½	Oct. 30, 1882	Do.
11	Louis Habermold	B	Second Infantry	2	11½	51	Nov. 3, 1882	Do.
12	John O'Halloran	C	Second Artillery	11	3½	37	Nov. 11, 1882	Do.
13	Arthur Versen	I	Second Artillery	9	6	38	Nov. 11, 1882	Do.
14	Joseph Shimek	A	Second Artillery	1	6	28	Nov. 16, 1882	Do.
15	Hugh McLaughlin	.....	Private, Ordnance	34	2 5/8	53	Nov. 23, 1882	Service.
16	George W. Warner	D	First Cavalry	3	4½	47	Nov. 23, 1882	Disability.
17	Edward Doyle	G	First Infantry	.....	10½	29	Nov. 25, 1882	Do.
18	William McLaughlin	.....	Ordnance sergeant	27	½	55	Nov. 28, 1882	Service.
19	Newell Guild	D	Eighth Infantry	2	1 7/8	60	Dec. 5, 1882	Disability.
20	Henry Holden	A	Second Artillery	15	4½	42	Dec. 5, 1882	Do.
21	William Lee	K	Seventeenth Infantry	3	6½	31	Dec. 7, 1882	Do.
22	William G. O'Donnell	H	Second Cavalry	1	.....	37	Dec. 13, 1882	Do.
23	Michael Donohue	K	First Cavalry	7	⅞	53	Dec. 14, 1882	Do.
24	Timothy Murnan	.....	Corporal, Ordnance	27	8 5/8	60	Dec. 16, 1882	Service.
25	Theodore McClellan	A	Sixth Infantry	12	½	34	Dec. 16, 1882	Disability.
26	Lucian Bassin	C	Eighth Cavalry	17	5½	57	Dec. 19, 1882	Do.
27	Richard Roberts	L	Fourth Cavalry	18	5 7/8	48	Dec. 27, 1882	Do.
28	James Flynn	D	Fourth Artillery	1	8½	51	Dec. 30, 1882	Do.
29	Cornelius Driscoll	E	Fourth Artillery	10	11½	42	Dec. 30, 1882	Do.
30	William Day	H	Fourteenth Infantry	4	5½	35	Dec. 30, 1882	Do.
31	Thomas Newham	G	Fourth Cavalry	6	½	28	Jan. 10, 1883	Do.
32	Patrick Heavey	.....	First-class private, Ordnance	18	4	45	Jan. 13, 1883	Do.
33	Hugh McGrath	B	Twentieth Infantry	1	6	55	Jan. 18, 1883	Do.
34	William Moran	G	Third Artillery	25	8	51	Jan. 25, 1883	Service.
35	George W. Weed	.....	Hospital steward	26	1½	49	Jan. 25, 1883	Do.
36	John H. Thomas	G	Mounted Rifles	1	10½	53	Jan. 29, 1883	Disability.
37	Edward Altman	A	First Artillery	12	½	34	Feb. 1, 1883	Do.
38	Gardner W. Bruce	M	Second Artillery	17	1½	43	Feb. 2, 1883	Do.
39	George W. Bouseman	D	Fifth Cavalry	.....	9½	37	Feb. 5, 1883	Do.
40	John Robinson	H	First Artillery	17	4½	50	Feb. 12, 1883	Do.
41	Michael O'Hearne	¥	Third Cavalry	23	4½	54	Feb. 13, 1883	Service.
42	Edward Donnelly	A	Fifth Artillery	20	9½	56	Feb. 21, 1883	Do.

List of names, &c., of men admitted to the benefits of the Soldiers' Home, near Washington, D. C., &c.—Continued.

No.	Names.	Last served in—		Service.		Age when admitted.	Date admitted.	Entitled by—
		Co.	Regiment.	Years.	Months.			
43	John Young	K	Second Cavalry	23		49	Feb. 21, 1883	Service.
44	John Dalton	.....	Second-class private, Ordnance	21	1	46	Feb. 28, 1883	Do.
45	Charles Enz	F	Seventh Cavalry	19	5	45	Mar. 1, 1883	Disability.
46	John A. Clunas	A	Fifth Artillery	2	9	33	Mar. 2, 1883	Do.
47	Christian B. Kauffman	F	Twelfth Infantry	4	2	25	Mar. 3, 1883	Do.
48	Abram P. Drost	C	Third Artillery	17	11	39	Mar. 7, 1883	Do.
49	Robert Horrigan	I	Twenty-seventh Infantry	2	3	40	Mar. 16, 1883	Do.
50	Theodore Bishop	B	Sixth Infantry	15	4	59	Mar. 16, 1883	Do.
51	James Harris	C	Second Artillery	20	2	40	Mar. 17, 1883	Service.
52	William O'Keefe	B	Second Artillery	20	11	44	Mar. 20, 1883	Do.
53	Wilhelm Jensen	F	Fifteenth Infantry	20	2	50	Mar. 23, 1883	Do.
54	Samuel Lowden	H	Twenty-second Infantry	16	1	40	Mar. 26, 1883	Disability.
55	Thomas Horan	B	Third Artillery	24	8	56	Mar. 26, 1883	Service.
56	Michael Mentz	B	Nineteenth Infantry	25	5	52	Mar. 27, 1883	Do.
57	Frederick Kahl	A	Signal Corps	20	5	54	Mar. 29, 1883	Do.
58	Peter Sparks	A	Second Artillery	10	8	40	Mar. 30, 1883	Disability.
59	Wm. H. Leffingwell	.....	General service	10	9	51	Mar. 30, 1883	Do.
60	Nicholas Johnson	K	First Cavalry	14	9	41	Mar. 30, 1883	Do.
61	Joseph Coyle	K	Fifth Cavalry	30	10	56	Mar. 30, 1883	Service.
62	William Mu he	D	Seventeenth Infantry	5	5	52	Mar. 31, 1883	Disability.
63	Herman Niemitz	E	Fourteenth Infantry	20	5	54	Apr. 2, 1883	Service.
64	Rudolph Richter	.....	Commissary sergeant	21	10	48	Apr. 3, 1883	Do.
65	Henry Burke	K	Fourth Artillery	2	11	43	Apr. 3, 1883	Disability.
66	Thomas Field	K	Sixth Cavalry	1	7	25	Apr. 6, 1883	Do.
67	James Schindler	A	Thirteenth Infantry	11	6	34	Apr. 11, 1883	Do.
68	John Hand	E	Twenty-second Infantry	21	8	48	Apr. 17, 1883	Service.
69	Heinrich Henecke	C	Eleventh Infantry	18	5	46	Apr. 20, 1883	Disability.
70	Daniel Conn	E	Sixth Cavalry	17		41	Apr. 24, 1883	Do.
71	Thomas H. Leas	.....	Military Academy, Detachment Artillery	22	3	52	Apr. 26, 1883	Service.
72	James Fitz Simons	.....	Corporal, Ordnance	21	3	52	Apr. 26, 1883	Do.
73	Frederick Prollicks	.....	Corporal, Ordnance	20	1	54	Apr. 26, 1883	Do.
74	William Hanley	K	Twenty-first Infantry	22	5	51	Apr. 30, 1883	Do.
75	Elijah Bowman	A	Third Artillery	21	2	48	May 2, 1883	Do.
76	Patrick Davin	M	Fifth Cavalry	26	7	56	May 3, 1883	Do.
77	Philip Callaghan	E	First Artillery	8	8	43	May 3, 1883	Disability.
78	James Mullica	K	Sixth Cavalry	5	11	33	May 4, 1883	Do.
79	Henry Bertz	B	Second Artillery	15	10	50	May 5, 1883	Do.
80	Hans Wienskowski	K	Third Artillery	19	1	55	May 8, 1883	Do.
81	Michael Walsh	A	Tenth Infantry	15	11	45	May 9, 1883	Do.
82	Thomas McHugh	A	Third Artillery	21	7	46	May 18, 1883	Service.
83	James Doody	D	Fifth Artillery	22	9	50	May 21, 1883	Do.
84	Louis DePerini	.....	Second Artillery, band	12	8	57	May 28, 1883	Disability.

85	Patrick Quilty	K	Thirteenth Infantry	20	3⅜	43	June 1, 1883	Service.
86	Henry Davis	B	First Artillery	33	9½	56	June 5, 1883	Do.
87	Henry Collins	.....	Commissary sergeant	21	11 7/16	51	June 5, 1883	Do.
88	John Brock	M	Eighth Cavalry	7	6 9/16	32	June 7, 1883	Disability.
89	Chauncey N. Sidner	H	Fifth Artillery	6	3½	28	June 8, 1883	Do.
90	Thomas Brown	E	Sixteenth Infantry	23	10⅜	51	June 9, 1883	Service.
91	Thomas McCarthy	H	Eighth Cavalry	15	.....	43	June 15, 1883	Disability.
92	Charles H. Polk	G	Second Cavalry	12	9½	45	June 15, 1883	Do.
93	John Sheridan	G	Fourth Infantry	20	4⅜	43	June 17, 1883	Service.
94	John F. Fletcher	G	First Artillery	25	6¼	79	June 20, 1883	Do.
95	Andrew Foley	.....	General service	20	1⅜	45	June 20, 1883	Do.
96	Michael Keating	D	Fifth Artillery	21	3½	43	June 20, 1883	Do.
97	Archbell Donnelly	B	Fourth Artillery	7	11 7/16	41	June 22, 1883	Disability.
98	Thomas Kelly	E	Third Artillery	26	6⅜	49	June 22, 1883	Service.
99	Michael Mahoney	K	Sixth Cavalry	14	5	44	June 23, 1883	Disability.
100	Edward T. Langdon	L	Third Cavalry	16	8 9/16	35	June 23, 1883	Do.
101	Isaac Williams	H	Eighteenth Infantry	2	6	43	July 5, 1883	Do.
102	Thomas Hand	D	Twenty-sixth Infantry	1	2	48	July 5, 1883	Do.
103	William Rish	A	Second Cavalry	14	11¼	45	July 7, 1883	Do.
104	Julius C. Hoskin	D	Sixth Cavalry	9	4⅜	36	July 16, 1883	Do.
105	Edward Hamilton	G	Fourteenth Infantry	22	8	50	July 20, 1883	Service.
106	John Rankin	B	Fifteenth Infantry	17	6	37	July 24, 1883	Disability.
107	James Sullivan	B	Fifteenth Infantry	22	7 9/16	46	July 24, 1883	Service.
108	John Benshoof	A	Thirteenth Infantry	8	10 7/16	49	July 27, 1883	Disability.
109	William Champion	I	Second Artillery	4	10 7/16	29	July 27, 1883	Do.
110	Henry D. Johns	.....	Second-class private, Ordnance	25	7⅜	53	July 30, 1883	Service.
111	Michael Burke	.....	General service	21	4	46	Aug. 1, 1883	Do.
112	John Witt	K	Sixth Cavalry	1	2½	25	Aug. 2, 1883	Disability.
113	Patrick Meehan	.....	First-class private, Ordnance	20	3 7/16	45	Aug. 2, 1883	Service.
114	Peyton T. Holmes	G	Ninth Cavalry	2	1½	23	Aug. 3, 1883	Disability.
115	Hamilton Hunter	D	Twelfth Infantry	20	2 9/16	52	Aug. 8, 1883	Service.
116	Jacob Muller	I	Second Artillery	22	7½	44	Aug. 9, 1883	Do.
117	William Seely	E	Seventh Cavalry	1	8 7/16	34	Aug. 14, 1883	Disability.
118	John T. Riley	A	Twelfth Infantry	21	2⅜	40	Aug. 16, 1883	Service.
119	William Taylor	F	Fourteenth Infantry	15	5½	37	Aug. 17, 1883	Disability.
120	William H. Kennedy	.....	Private, depot band	29	1/16	51	Aug. 22, 1883	Service.
121	Edward A. Sheehan	D	Thirteenth Infantry	1	6	23	Aug. 23, 1883	Disability.
122	Daniel McAfee	A	Second Artillery	6	7⅜	28	Aug. 23, 1883	Do.
123	John Dwyer	F	First Cavalry	17	5⅜	42	Aug. 29, 1883	Do.
124	Frank Conley	A	Second Artillery	16	3⅜	41	Sept. 3, 1883	Do.
125	William S. Leonard	C	Fifth Cavalry	1	5½	35	Sept. 6, 1883	Do.
126	Thomas Fitzgerald	D	Eighteenth Infantry	2	4 9/16	57	Sept. 14, 1883	Do.
127	Russell J. Brewer	H	Nineteenth Infantry	4	8	27	Sept. 17, 1883	Do.
128	Richard W. Scott	K	First Infantry	8	6 1/16	36	Sept. 18, 1883	Do.
129	Charles Hager	.....	Military Academy, Detachment Artillery	20	6	46	Sept. 18, 1883	Service.
130	James Thomas	K	Forty-second Infantry	9	3⅜	50	Sept. 19, 1883	Disability.
131	Jacob Guth	B	Thirteenth Infantry	23	4 7/16	55	Sept. 21, 1883	Service.
132	William Goes	.....	Commissary sergeant	19	7 1/16	42	Sept. 25, 1883	Disability.
133	James E. Smith	I	Third Artillery	15	2	45	Sept. 25, 1883	Do.
134	George J. Gehrke	G	Twelfth Infantry	23	5⅛	53	Sept. 29, 1883	Service.

UNITED STATES MILITARY ACADEMY.

BOARD OF VISITORS, JUNE, 1883.

APPOINTED BY THE PRESIDENT OF THE UNITED STATES.

1. Rear-Admiral C. R. P. RODGERS (*President*).....U. S. Navy.
2. Col. L. M. DAYTON (*Secretary*).....Ohio.
3. Hon. ISAAC N. ARNOLD.....Illinois.
4. Hon. J. SCHUYLER CROSBY.....Montana.
5. Hon. B. C. WHITMAN.....Nevada.
6. Mr. HOWARD POTTER.....New York.
7. Hon. ASA FRENCH.....Massachusetts.

APPOINTED BY THE PRESIDENT OF THE SENATE.

8. Hon. ANGUS CAMERON.....Wisconsin.
9. Hon. ISHAM G. HARRIS.....Tennessee.

APPOINTED BY THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

10. Hon. GEORGE W. STEELE.....Indiana.
11. Hon. AMOS TOWNSEND.....Ohio.
12. Hon. WILLIAM A. J. SPARKS.....Illinois.

REPORT

OF THE

BOARD OF VISITORS OF THE MILITARY ACADEMY.

WEST POINT, *June*, 1883.

SIR: The Board of Visitors appointed to attend the annual examinations of the Military Academy at West Point have attended to their duty, and submit the following report:

All the members of the Board were present with the exception of Senator Cameron, of Wisconsin, and the Board organized by the election of Rear-Admiral C. R. P. Rodgers as president of the Board, and of Col. L. M. Dayton as secretary.

At the first meeting of the Board the following committees were appointed, viz:

Committee on the state of discipline, including drill:

Hon. J. Schuyler Crosby.
Hon. George W Steele.
Hon. B. C. Whitman.
Col. L. M. Dayton.

On instruction:

Hon. Isaac N. Arnold.
Hon. Asa French.
Hon. Amos Townsend.

On police administration, including buildings and grounds:

Hon. William A. J. Sparks.
Hon. J. Schuyler Crosby.
Col. L. M. Dayton.
Hon. Asa French.

On fiscal affairs and other concerns of the Military Academy not provided for in the other committees:

Hon. Isham G. Harris.
Hon. Amos Townsend.
Mr. Howard Potter.
Hon. George W. Steele.

These several committees immediately proceeded to the work assigned them, making a careful examination of all the departments of the Academy, the results of which were reported to the full Board for its action.

It is proper to add that the conclusions of the Board now to be presented are based not alone upon the reports of these committees, but upon the personal inspection of each individual member of the Board so far as that was practicable in the time allotted to the work.

We desire to express our high appreciation of the uniform courtesy shown to us by the Superintendent, General Merritt, and by all the officers and professors of the Academy. Every possible facility was furnished by them to enable the Board to make a thorough investigation of all matters connected with the administration of the Academy down to the minutest detail. To General Merritt we are especially indebted for valuable suggestions made by him to the Board at its request.

DISCIPLINE AND DRILL.

The state of discipline is most excellent, and is characterized by great fairness and absolute impartiality. The fine military bearing of the cadets, their superb physical development and cheerful faces, show that the system pursued is wise and not unnecessarily severe. The precision with which the evolutions and movements were made by the corps of cadets in artillery, cavalry, and infantry gave evidence of most thorough training. And the same is true of the target practice with the large guns and mortars. The exercises, too, in ponton and sparbridge building indicated great proficiency in that branch.

INSTRUCTION.

In the various departments constituting the academic course the cadets showed a degree of intelligence and efficiency reflecting the highest credit upon their instructors, as well as upon themselves. Something more than a familiar knowledge of text books is required. The cadet must understand the principles of the subject in hand. However correct the result at which he arrives may be, he is not suffered to go without giving the reason.

So far as we can judge the results of the course of instruction and training at the Academy are in the highest degree satisfactory.

A graduate of West Point is, almost of necessity, a gentleman in the best sense of the word—a man of intelligence, integrity and truth—the very best material for a brave and efficient soldier and a useful citizen. A system of instruction producing these results is entitled to the support of the Government and the respect of the people.

The great wonder is that in the short period of four years such a wide field of study can be covered, and at the same time the work can be done so well. Nothing but the utmost fidelity on the part of the officers and professors in steadily upholding and enforcing the requirements of the course can account for it.

POLICE ADMINISTRATION, INCLUDING BUILDINGS AND GROUNDS.

A careful inspection of the buildings showed the necessity of some general repairs to the cavalry stable, which, in the opinion of the Superintendent, can be made out of the general appropriation under that head. It would be easy to suggest other changes and alterations for which no specific appropriations have been made, and which would materially add to the convenience of the buildings and be of permanent benefit to the Academy.

We confine ourselves, however, to recommending such improvements only as we deem absolutely essential to the efficiency of the Institution and the comfort and well-being of those for whose education and training it is maintained.

There is pressing and immediate necessity for new floors in the cadet barracks and in the academic building, at an estimated cost of $5,000.

The present bathing accommodations for the cadets are insufficient and wholly inadequate to the requirements of cleanliness and good health. Only thirteen bath-tubs are now provided, and these need thorough repair. This limited number makes it necessary for many of the cadets to bathe at unseasonable hours, and should be increased to at least fifty in number, which can be done at an expense of not exceeding $3,000.

The sum of $5,000 is necessary for the completion of the new hospital building and for grading the grounds around it.

It is important that the main pipe for the supply of water should be extended from its present terminus to the cadet barracks, which will cost $3,000.

There are several old and dilapidated wooden buildings located near the artillery and cavalry barracks and used for work-shops and storehouses. They are in the last stages of decay and crowded closely together, and are wholly unsuited to the uses to which they are put. Should a fire break out among them (an event very likely to happen) it would cause the loss of much valuable property stored in them and greatly endanger the safety of neighboring buildings. We recommend their removal, and the erection of a suitable building or buildings of substantial materials in their place. The cost of this will be $6,000.

The foregoing estimates were furnished to the Board by the Superintendent, and may be relied upon as approximately correct.

GYMNASIUM.

During the past two years regular instruction has been given in gymnastic exercises, the results of which have been most satisfactory.

There is but one opinion on the part of the Board as to the importance of continuing this branch of instruction, and of making it more efficient by providing adequate accommodations for its development. The room now used for that purpose in the academic building falls far short of the requirements of a modern gymnasium, and is utterly unsuited for the purpose to which it is applied.

In the opinion of the Board a plain and substantial building should be erected and furnished with such apparatus as may be needed for a thorough physical training. No estimate has been made of the cost of such a structure, and our purpose is accomplished by calling attention to its necessity.

FISCAL AFFAIRS.

A careful investigation was made into the manner of conducting the financial affairs of the Institution, the result of which was in all respects satisfactory. The books are carefully and methodically kept, and the whole system is conducted upon sound business principles.

The duties of the quartermaster and commissary of cadets are now well discharged, and the cadets are furnished at all times with suitable, well prepared, and abundant food.

Very great credit is due to the officers in charge of this department.

In conclusion, it gives the Board great pleasure to report that in all

the departments of the Academy they have found nothing to censure, but everything to commend. It has been especially impressed with the high moral tone, the military style, and soldierly bearing both of the officers and cadets of the Academy.

Very respectfully submitted.

C. R. P. RODGERS,
President of the Board.
L. M. DAYTON,
Secretary of the Board.
ISAAC N. ARNOLD.
J. SCHUYLER CROSBY.
B. C. WHITMAN.
HOWARD POTTER.
ASA FRENCH.
GEO. W. STEELE.
AMOS TOWNSEND.
W. A. J. SPARKS.

HON. ROBERT T. LINCOLN,
Secretary of War.

REPORT ON THE BUILDING FOR STATE, WAR, AND NAVY DEPARTMENTS.

4132 W——44

REPORT

ON

CONSTRUCTION OF BUILDING FOR STATE, WAR, AND NAVY DEPARTMENTS, 1883.

OFFICE OF BUILDING FOR
STATE, WAR, AND NAVY DEPARTMENTS,
Washington, D. C., July 2, 1883.

SIR: I have the honor to transmit the following report of operations on the building for State, War, and Navy Departments for the fiscal year ending June 30, 1883.

During the year the north wing of the building was finished and occupied by the War Department, and work was commenced on the approaches of the north front.

The preparation of drawings and of cut granite for the west and center wings was also commenced and well advanced.

NORTH WING.

The work remaining unfinished on this wing at the close of the last fiscal year chiefly consisted of the flooring, tiling, passenger elevator, main-stair railings, parquetry flooring, fresco painting, chandeliers, mantels and grates, hanging of doors, painting, and the area elevator for the court-yard. Contracts were in force for all the materials required excepting the fresco painting and parquetry flooring of rooms intended for the special use of the Secretary of War.

The remaining cast-iron door-frames, washboards, and stair-strings were finished in July, the board flooring of office rooms in August, and the marble tiling of corridors on October 23.

Ten rooms were painted in decorative designs and two received parquetry floors. The remainder of the office rooms, sixty-nine in all, as well as the corridors and domes, were left with white walls and ceilings.

The passenger elevator, an unusually powerful, rapid, and complete apparatus, fully provided with the most approved safety appliances and constructed in a most thorough manner, was completed on April 3.

All chandeliers and other gas-fixtures were hung in August and September, the area elevator was put into running order in October, and all the mahogany doors were hung early in December.

Owing to some delays in the contract work the building was not made entirely ready for occupancy until December 23, 1882, on which day the working force was discharged, leaving only the passenger elevator unfinished. The upper stories were, however, completed some months earlier, and on September 15, 1882, the Adjutant-General was given possession of seventeen rooms in the fourth and attic stories. Only seven

of these rooms were immediately occupied, the remainder standing vacant until the War Department took possession of the entire wing and commenced moving into it, on February 5, 1883. On the 20th of November previous, the large room in the basement of the center pavilion was occupied by the Department for storage of books.

For the information of the Department occupying the building, the following communication, with the drawings it refers to, giving some description and directions concerning the apparatus and arrangements provided for the comfort and convenience of the occupants, was sent to the Secretary of War.

OFFICE OF BUILDING FOR
STATE, WAR, AND NAVY DEPARTMENTS,
Washington, D. C., March 6, 1883.

SIR: In obedience to your instructions, I have the honor to present herewith the following memoir, accompanied by a roll of fifteen sheets of drawings, concerning the interior arrangements of the north wing of the building for State, War, and Navy Departments, lately occupied by the War Department.

The building necessarily contains an extensive and somewhat complex apparatus for heating and ventilation, steam, water, gas, and telegraph service, drainage and elevators, all of which, down to the smallest detail, is in perfect working order and well adapted and arranged for durability and reasonable accessibility of parts. Much of the apparatus is concealed within the walls and floors of the building.

The drawings show the relative locations and arrangements of boilers, pumps, pipes, air ducts, flues, dust chutes, and drains, and the general details of the passenger and area elevators. To avoid confusion, some pipes and details of minor importance are omitted in the drawings, but care has been taken that the descriptions here given and the drawings and visible parts of the fixtures taken together shall furnish a complete guide to a full knowledge of the entire apparatus. To this end also the drawings are, in some particulars, more in the nature of diagrams than rigid scale drawings.

HEATING APPARATUS.

(See drawings Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 12.)

Excepting two small steam radiators in the attic, the building is warmed entirely by hot air circulating through direct and indirect radiators of coiled pipes, the water being heated in either or both of two tubular boilers located together in the sub-basement.

The indirect coils are all located in the sub-basement, and the direct coils in the window recesses of the basement and the first story, a few of the latter being similarly placed in the second, third, and fourth stories, while seven direct coils stand in the central parts of the corridors of the first and second stories. The entire system, consisting of boilers, flow and return-pipes, coils, and rising pipes, is filled with water from two small tanks on the attic floor, the height of water in which above any point of the apparatus constitutes the hydrostatic head of the water pressure at that point.

As shown by the drawings, every part of the building except the attic and cockloft is directly warmed by this apparatus, while the two clerical rooms in the attic are warmed by the steam coils or radiators above mentioned. The latter are supplied with exhaust steam from the pumps, forced in by means of the back-pressure valve in the aspirating chimney.

All indirect coils have an air supply which is conveyed directly by independent closed ducts from the outside of the building. This is also true of all but six of the direct coils in the basement, of all but six in the first story, of none in the second and third stories, and of the seven coils in the large central room of the fourth story. The coils which have no outdoor air supply have no connection with the air of any room or space below or above. Each direct coil is provided with a safety pan from which a ¼-inch waste-pipe leads to the sub-basement with an outlet in sight serving as a tell-tale, which outlet is provided with a glass water-trap.

Every room and nearly every corridor in the building, however, except the sub-basement and attic, has an independent fresh-air supply so arranged as to be entirely free from contamination except by a most wanton neglect or abuse of the apparatus.

Every fresh-air inlet is regulated by a damper, and every direct coil having such an inlet and damper is also provided with a slide in the base of the screen, to be *opened* when the damper is *closed* and *vice versa*.

The indirect coils are all provided with independent ½-inch draw-off pipes, to facilitate emptying any one coil, in case of accident or needed repair, without affecting the action of others.

On the manhole door and damper plate of each of the indirect coil boxes is placed a number or letter indicating the story to which the corresponding hot-air flue leads.

The two supply-pipes from the small tanks—one at each extremity of the main boiler-room—run directly down to the return-pipes and are *without valves*. Neither are any valves placed in the boiler connections. This is to guard against the great danger of straining and serious injury to the whole apparatus that would result from the accidental or malicious closing of such valves at the wrong time, cutting off the circulation. Such might be the result even after the fires had been drawn, from the heat remaining in the surrounding mass of brickwork.

The following general rules and observations should govern the management and care of the heating apparatus:

1. The whole apparatus should be kept full of water the year round, whether required for warming the building or not. It should not be drawn off except when absolutely necessary to effect important repairs, and then only from the section involved. Valves are specially placed throughout the apparatus for this purpose. The two small supply-tanks or "expansion" tanks in the attic should therefore never be empty. By observing this rule the formation of a coat of rust on the inner surface of the pipes each time they are laid bare, the injection of fresh aerated water, and the drying up of valve stuffings and joints will be prevented, and few leaks need be expected for many years unless the pipes, &c., should be subjected to shocks or displacement.

2. The temperature of the water in the flow pipes, as indicated by the thermometers on the main pipe over the boiler pit, should never exceed 210°. The average temperature for ordinary weather will be about 160°. A temperature higher than 210° would not, however, endanger the apparatus, as the steam pressure generated would be relieved through the expansion tanks, but the steam would tend to collect in the upper parts of pipes and heating coils and stop the circulation of the water. The generation of steam would also be a waste of fuel.

3. In cold weather the air dampers of all coils, both direct and indirect, should be closed at night, or whenever the building is unoccupied and ventilation not necessary, as in this way heat will be saved, and in extremely cold weather any tendency of the coils to freeze greatly lessened.

4. All coil valves should be at lesst partially open at all times, day and night, during freezing weather, so as to secure a sufficient rate of circulation of the water to prevent freezing. Direct coils in corridors and those in window breasts not supplied with air, and therefore not likely to freeze while the building is warm, may, however, have their valves entirely closed without danger. The valves should never be manipulated by the occupants of the rooms, but should be under the control of the person who is in charge of the entire heating apparatus.

5. All direct coils are provided with air-cocks. The indirect coils need none. The air-cocks should be opened as often as need be to blow off accumulated air which tends to stop circulation. Some of the cocks—those in the higher parts of the building, possibly—may require more frequent attention than others.

6. The ¼-inch waste pipes leading from the safety-pans under the direct coils should be examined and cleared out by running a flexible wire through them from the pans once every six months.

7. Should it become necessary to repair a *direct* heating coil, it may be disconnected from the system by closing valves on the rising pipes communicating with it, and the water may be drawn off through the small waste-pipe connected to the return riser in the sub-basement. Such emptying would also involve all coils upon the same riser. *Indirect* coils (those in the sub-basement only) may be disconnected and emptied individually by means of the valves and waste-pipes provided.

8. In case of a leak in a boiler or main pipe, necessitating the drawing off of the water to make repairs, the heat in the building may be retained for a short time—twenty-four hours, more or less, according to the weather—by closing the coil valves and *taking care at the same time to close the air dampers should the weather be freezing cold.* In this condition the direct coils will operate in the usual way for a time to heat the air *in the rooms* they occupy, but it would be necessary to open the lower manhole doors of the *indirect* coils to admit air from the cellar through them to the hot-air flues.

9. When it may become unavoidably necessary to empty the whole or any part of the apparatus of water, the air-cocks of such part should be opened to facilitate the discharge. They must also always be opened carefully during the process of filling to allow each coil to get solid full of water.

10. The most faithful, vigilant, and intelligent supervision is absolutely essential over any extensive heating apparatus to insure the user the best results as to temperature of the building warmed, preservation of the apparatus, and economy of fuel and repairs. No person not certainly known to possess the requisite qualifications should be entrusted for a moment with the care of this apparatus, or of the steam boiler, elevator, and pumps.

VENTILATION.

(See drawings Nos. 1, 2, 3, 4, 5, 6, 8, and 13.)

Every room in the building, from the basement to the fourth story, inclusive, is provided with inlet and outlet passages, or flues, well located and proportioned for the admission of outdoor air and the withdrawal of foul air by natural draught. The corridors are also ventilated independently to a certain extent.

The air is admitted fresh in every case through the heating coils, and is withdrawn by the fire-place or ventilating flues, all of which are located in the corridor or cross walls. The outlet flues are designated in the drawings "ventilating" flues, and the inlet as "heating" flues. Most of the ventilating flues of the court-yard rooms are collected at the cock-loft floor into an aspirating chimney, in which is placed a coil of exhaust steam pipe to accelerate the draught. Ventilating flues are also placed in the two front curtain rooms and two rear rooms of the attic, while all the other attic rooms and the domes of the main stairways have roof ventilators.

For the ventilation of the sub-basement the windows and the furnaces of the heating boilers are relied upon. The main sewer trench, however, has a large ventilating duct leading to the flue containing the funnel of the steam boiler.

The system being mainly one of *natural* ventilation, its operation depends upon the relative coldness of the external air, except as to those flues which communicate with the aspirating chimney containing the steam coil, which aids the draft the year round.

In summer weather, therefore, when the external air is as warm, or warmer, than the internal, and doors and windows are generally open, there will be but slight motion of the air in the flues, and that motion may be in either direction, according to circumstances. But in cool or cold weather, when the internal temperature is kept up by artificial means, the ventilation will be quite thorough and perfect with the doors and windows closed, unless many more than the calculated number of persons, that is, one to about 55 square feet of floor, continuously occupy the rooms.

All water-closets and bath-rooms are thoroughly ventilated through the fixtures and under the floors, and the flues communicating therewith are supplied with artificial aid to the draught as follows: In the bath-rooms of the Secretary's appartments, by means of gas-burners in the flues, needing to be lighted only in warm weather; in the flue of the easterly series of closets, by means of the smoke funnel of the heating boilers in winter, and an exhaust steam coil in summer; and in the flue of the westerly closets, by means of the steam-boiler funnel the year round.

The following rules and observations should govern the use of the dampers and registers regulating ventilation:

1. All registers and fire-places should have a free and *full opening* into the rooms and not be more or less obstructed by furniture, file cases, or other things placed either against or near them, as has often been the case in the other wings of the building.

2. Allow no smoke, dust, nor anything that can generate foul odors or gasses to come near the fresh-air inlets, and see that traps in area drains and down pipes from the roof or elsewhere are kept full of water.

3. The air dampers of *direct* heating coils may be regulated by the occupants of the rooms, while those of the *indirect* coils will be better managed by the person in charge in the sub-basement. These dampers and the registers in the heating and ventilating flues of the rooms furnish the means of obtaining any desired velocity or temperature of air-currents within certain limits. Small inward currents are likely to be warmer because the air is longer in contact with the heating-coils. On windy days the air-dampers on the weather side of the building should not be as wide open as on quiet days. When they are wide open the registers in the ventilating flues should also be wide open to give a good circulation and constant change of air. The ventilating registers should generally be left wide open at all times, and, under all ordinary conditions, it would be better if they were fastened open to prevent accidental closing. For this reason the corridor registers are without valves.

4. For one or two hours after the occupants of the building have left it for the day, and before they arrive in the morning, the ventilators should be in full operation to insure a thorough change of air and a building full of pure air at the commencement of the day's business.

5. As with the heating appartus so with the ventilation; intelligence and watchfulness are indispensable to its proper mangement.

6. It should be the business of a man of good judgment to go about the building constantly and regulate the heating and ventilating valves, registers, and cold-air dampers to the ever varying condition of the weather while the heating apparatus is running. Such regulating should generally be governed by thermometers distributed through the building.

STEAM SUPPLY.

(See drawings Nos. 1, 7, 8, 10, 11, and 12.)

One boiler located under the court-yard, supplies steam for the house and elevator pumps, and is connected by a three-inch pipe with the steam-pipes of the east wing in such a manner as to interchange boiler service during needed repairs or other emergency. It alse furnishes live steam for heating the bath boiler.

By means of the steam-pumps, a complete system of stand-pipes and fire-hose, as well as the water supply for the building, and for the passenger and area elevators, is provided.

The pumps are so connected that either will do all the work of the other, except that the house-pump is not intended to run the passenger elevator with frequent long trips at full speed unless it is itself worked at an excessive speed.

The exhaust steam-pipe connecting the pumps has two outlets to the open air, one on the center pavilion and one on the brick chimney at the court-yard angle with the east wing.

Five steam-traps are used. One is connected to the feed-heater of steam-boiler, two to the drips of the rising exhaust-pipes, one to the drips of the pumps, and one to the live steam-drips of the pump-pipes and bath boiler, all as shown in the drawings.

The steam-boiler may be fed by five different means, all feed water passing through the heater. These are: first, the injector, for ordinary use; second, the house pump; third, the elevator pump; fourth, the Potomac aqueduct pressure; fifth, the tank pressure. The latter, however, must be accomplished by closing a valve at the fish-trap in the water main and throwing the tank pressure into that main through the 2½-inch supply down pipes from the tanks.

WATER SUPPLY.

(See drawings Nos. 1, 7, 8, 12, and 13.)

The water supply is derived from an 8-inch Potomac main entering the sub-basement of the building at the east end. Near the entrance a fish-trap is placed, from whence the main continues along the trench, as shown, with a diameter of 6 inches. It connects directly with the water-closets, Secretary's bath-rooms, heating apparatus, house-pump, and a flush-pipe for the sewer.

As the Potomac pressure is not reliable above the first story, higher points in the building are supplied from two tanks in the attic filled by the pump. The main supply down pipes from these tanks continue to direct connections with the main in the sub-basement trench, and have "mixing" valves at each story, so as to allow the Potomac pressure to be utilized as high up as possible and save pumping.

An equalizing pipe runs down and along the trench and connects the down pipes at points above the fourth floor, enabling either tank to serve for the other. This pipe also supplies the bath boiler, Secretary's bath-rooms, and an area elevator at tank pressure, and is the means of supply for the regular operation of the latter.

The Potomac water may be used at the fire-plugs or any point in the water system, hot or cold, without the aid of the pumps or tanks, as far up as its natural pressure will carry it, by the proper manipulation of the valves provided.

In addition to the direct and obvious use of the water system of pipes and valves, certain kinds of indirect supply in cases of emergency may be obtained by manipulating the valves as follows:

1. If a water-closet is cut off by the mixing valves from a direct supply both above and below, a supply through the bath boiler (hot or cold according to the condition of the boiler) may be obtained by opening *both* the ½-inch cocks, under the seat of closet stall No. 1, used for supplying the urinal flush tank.

2. To empty the main tanks into the sewer without using the direct draw-off pipes to the rising soil-pipe in the attic, open both the waste and supply valves under the trench plate close by the bath boiler.

3. To empty the main tanks into the Potomac main without drawing directly down by the 2½ inch main supply down pipes, open *both* the cold water supply valves in the sub-basement leading from tank equalizing pipe and Potomac main to either of the Secretary's bath-rooms.

4. To get hot water at Potomac pressure at such height as that pressure will supply it, turn on the direct Potomac supply in the sub-basement at either or both the valves communicating with the Secretary's bath-rooms. This will fill the bath-boiler through the tank equalizing pipe.

5. To feed the heating apparatus from the main tanks—the water in the latter being below the feed-pipes to the expansion tanks—close either of the valves at the fish-trap in the Potomac main and throw the tank pressure into the main by opening all communicating 2½-inch valves and then open the 3-inch Potomac feed-valve in the apparatus in the middle of the trench.

6. To operate the area elevator with Potomac pressure, the tank supply not being available, make connection with the tank equalizing pipes, as in case 4.

FIRE APPARATUS.

(See drawings Nos. 1, 2, 3, 4, 5, 6, 7, and 12.)

This consists of either the house or elevator pump and the two 4-inch rising pipes in the water-closets, on which are 2½ inch fire-plugs, with hose, spanners, and nozzles at each floor from sub-basement to attic, inclusive. A fire-plug is also located in the court-yard, which may be used for washing the court-yard or walls.

At the top of each of the rising pipes (which are also used for feeding the tanks) is a safty-valve, so loaded and contrived that it may be closed instantly by the engineer in the sub-basement, thereby throwing the riser into service as a fire pipe with a water pressure at the top of about 50 pounds per square inch.

In the event of an alarm of fire being given, the engineer in the sub-basement should start the pump and pull down the two handles connecting with the safty-valve wires to close these valves. This can be done in a few seconds, when a powerful stream of water may be had at any or all of the fire-plugs by opening the fire-plug valves.

To keep the apparatus in working order and in constant readiness, all of the fire-plug valves should be unseated, the threads of the coupling screws oiled, the hose stretched out and examined, and the back pressure safety-valves at the tops of the rising pipes tripped and tested by means of the operating wires, once every two months.

PLUMBING.

(See drawings Nos. 12 and 13.)

These arrangements are very fully shown in all essential particulars in the drawings. Most of the parts are easily accessible. Every connection to the soil pipes is trapped and every trap is fully vented to the open air through independent main vent pipes rising above the roof of the building.

A safe of sheet lead covers the sub-floor of each water-closet above the sub-basement, from which a waste-pipe opens over a funnel placed in sight in the cupboard casing in the corner of the closet below, which pipe communicates with a single rising safe waste, 1½ inches in diameter, opening over the slop-sink or wash-basin in the sub-basement, as a tell-tale. Thus a dripping at the lower end of this pipe can be traced to its source in a few minutes.

The safe wastes of the Secretary's bath rooms, one for each, open out under the ceiling of the sub-basement, vertically below, near the soil-pipes.

Care should be taken not to overflow the bath tubs in the Secretary's rooms, where an unusually large supply of water is provided for the purpose of rapidly filling the tubs, more than could well be disposed of through an overflow outlet.

GAS-FITTING.

(See drawings Nos. 1, 2, 3, 4, 5, 6, 8, and 13.)

The building is supplied with gas through a 6-inch main, which enters at the east end near the water main. From the meter a 4-inch pipe passes under the stairway and rises in the corner of the series of easterly water-closets to the attic. At each floor a 2-inch branch is taken off, running in the corridor just under the tiles, and branching with proper-sized pipes to the several gas fixtures.

In general the system of pipes in each floor supplies the fixtures of the story below *only*, except in the attic system, which supplies *both* the fourth story and attic.

A stop-cock is placed in each of the 2-inch branches from the rising main near the junction, and a wrench for operating it hangs behind the wooden casing over the slop-sink.

The positions and sizes of gas pipes and fixtures are indicated in the drawings.

ELECTRIC COMMUNICATION.

(See drawings Nos. 1, 2, 3, 4, 5, 6, 7, and 14.)

Provision is made throughout the building for running concealed electric wires so as to put all the rooms in communication with each other. As no definite plan of desired arrangement of wires could be furnished in advance of construction, the rule was followed to provide for a larger number of wires throughout the principal stories than in other places. This is especially the case in the second story.

All telegraph and telephone wires for the entire State, War, and Navy building will ultimately be brought into the sub-basement through the 8-inch subterranean cast-iron conduit running from the northwest corner of Seventeenth and G streets to the west end of the north wing, as shown in drawing No. 14; thence to be distributed and conducted through the building. For this purpose, as well as for internal communication, a number of vertical flues are built in the corridor walls, extending from

the sub-basement, generally to the attic, with hand-holes, at each floor, in the wash-boards of the rooms. On the hand-hole plates the word "wires" is cast. From each of these run leaden pipes of various sizes along the walls under the floor-boards, with outlets under the iron door saddles, and with branches to the centers of certain rooms for connection to desks. Insulated wires may be threaded through these pipes in any direction, up or down the flues.

A pair of insulated wires has been placed behind the jambs of most of the corridor doors, as shown in the drawings, with ends under the door saddles and at tops of the transoms, to facilitate the use of call-bells, or other electric fixtures. This admits of ready concealment of the corridor bells in the transom openings, and saves disfigurement of the walls.

DRAINAGE.

(See drawings Nos. 1, 2, 8, 12, 13, and 14.)

All water from the roof, areas, approaches, water-closets, and waste water pipes of the building is conducted to the sewer.

Traps have been placed in all drains or waste-pipes, where necessary to prevent the foul air of the sewer from penetrating the building.

The sewer is of brick and quite air-tight, while all drains and waste-pipes which enter it are of iron. The drains of the approaches will be of terra-cotta.

From the 3-inch pipe and valve provided for the purpose at the upper or west end of the sewer a full head of Potomac water should be turned in for a few minutes, occasionally, as a flush.

PASSENGER ELEVATOR.

(See drawings Nos. 7 and 15.)

In the operation of this machine, as in all passenger elevators whatsoever, constant vigilance and intelligent care are indispensable.

Although provided with an extraordinary number of the most efficient safety appliances, including an air cushion in the bottom of the shaft, any of these may gradually get out of order if not properly attended to. While any of them are in working order—and there can generally be no reasonable excuse for their being otherwise—the danger of a fall of the car is almost beyond possibility. If it should fall, however, no serious injury could result to the occupants, as the air-cushion would then come into action and break the fall. To insure this result, therefore, the elevator doors of the basement and sub-basement, and especially the latter, should never be left even partially open for a moment, under any circumstances, while the car is in use above that point.

The elevator is raised by hydrostatic pressure at a head equal to about 20 feet less than the height of the water in the upper tank above that in the lower tank, supplemented by the expansive force of air in the upper tank at a maximum compression of 25 pounds per square inch. It descends by its own weight. The water used at each trip is pumped back to the upper tank by the automatic action of the steam-pump.

The safe strength of the elevator is far beyond any load of passengers that can be crowded into the car, and its speed is intended to be from 200 to 300 feet per minute, according to load.

Aside from the reasonable degree of mechanical intelligence required in the superintendence and operation of this machinery, a few important rules for its management are here given, namely:

1. Examine the overhead gear and governors and try the action of the safety pawls under the car every morning before the elevator is started.

2. Oil and clean the governors, pulleys, and the safety apparatus under and upon the car as often as may be necessary to keep every part in smooth working order and free from the slightest clogging with dirt. The frequency of cleaning will depend upon the quantity of dust carried by the air in the shaft.

3. Examine frequently all attachments, nuts, and bolts connected with any of the safety fixtures or ropes, and correct any displacement that may be discovered. Never allow these things to take care of themselves.

4. As above recommended, never allow the air-cushion doors, especially the lower one, to be open for a moment except when necessary to pass in or out of the car.

5. Draw off the water from the upper tank into the lower one every evening and pump up again just before using the elevator. This will more certainly insure the proper supply of air in the upper tank.

When the elevator is stopped for the day it should be run up to the top of the shaft and left there until again needed, being held in place by the pawls thrown into the guide-racks by hand by hand by means of the governor ropes. The main valve should then be set in the position it takes for the descent of the car. This will generally prevent any accumulation of air in the cylinders.

AREA ELEVATOR.

(See drawings Nos 8 and 11.)

This elevator, located in the court-yard area, is raised and supported by the hydrostatic pressure of water in the main tanks, at a head of 90 to 95 feet. It descends by its own weight. Its lifting capacity is therefore limited, as present connected, to 2,000 pounds.

It is designed especially as a receptacle for the collection and removal of ashes and sweepings from the building, but may of course be used for lifting or lowering other loads at will.

A steam coil is placed in the valve pit, by which freezing may be prevented.

ROOF.

All deck surfaces of the roof are finished off with Portland cement mortar troweled down hard and covered with 12-ounce sheet copper, and all of the gutters are lined with 14-ounce sheet copper. The whole is constructed and fastened in the best manner that could be devised to resist the constant action of expansion and contraction, and is without doubt one of the most perfect metal roofs in existence.

Nevertheless, owing to the necessary multitude of angles and irregularities of form in the surfaces, heat and cold will, in time, cause slight breaks at some points, but none that may not be easily repaired and checked by proper inspection and workmanlike attention.

For this purpose the roof should be carefully examined by a competent expert copper-roofer at intervals not exceeding six months and every break promptly repaired. In this way but little expense need be incurred annually, and the roof covering should last almost as long as the building itself. The cost of repairs may greatly exceed that of a new roof covering if delayed too long, as the building may be suddenly damaged by leaks from severe storms and accumulations of melting snow.

Large quantities of ice and snow in the gutters and valleys should be removed, as soon as thawing commences, by means of *wooden* implements only.

No walking upon the roof should be permitted except when necessary for its examination and care, and then only in shoes without projecting nails.

Tools should of course be handled on the roof with reasonable care.

The valleys and gutters of the roof should be swept clean as often as once in three months.

Very respectfully, your obedient servant,

THOS. LINCOLN CASEY,
Lieutenant-Colonel, Corps of Engineers.

APPROACHES OF NORTH WING.

The appropriation for the approaches to this wing having been made in August, 1882, contracts were signed in September, 1882, after due advertisement, for all the cut granite, bluestone flagging, and tiles required for the approaches and street sidewalks on the north front. The first cargo of granite arrived on May 1, and of bluestone on May 14, 1883.

On March 26, excavation for the approaches was commenced by the contractor and completed on May 25. The laying of foundations of walls was then commenced. These have since been completed and the building of walls begun. The work is proceeding as rapidly as the delivery of materials by the contractors will permit.

At this date the entire east retaining wall has been built, excepting five stones and one post. The ashlar and coping of the easterly wall on Pennsylvania avenue have been built, and most of the dry stone backing laid up for the two westerly retaining walls. The water pipe and about one-half of the drain pipe have also been laid.

WEST AND CENTER WINGS.

The first appropriation, amounting to $350,000, for the construction of these wings, was made by act approved August 7, 1882. Under it orders for cut granite amounting to nearly $321,000 were executed according to the terms of the existing general contracts on the 7th of November, 1882, and since that time the preparation of the stone has

been going on. Nearly all of the granite for the first-story front of the west wing has already been delivered. Less progress has been made by the contractor on the granite for the sub-basement, basement, and area walls, but the first cargo of it has arrived within the last week.

Meantime considerable progress has been made in the office upon the working drawings of these wings, including the stone-work, heating and ventilating apparatus, the design of the War Department library, and the general plans of floors.

A second appropriation to the extent of $500,000 was made by act approved March 3, 1883, for these wings, of which the sum of $210,000, has been applied to the preparation of cut granite for the second and third stories of the west front, for which an order under the existing contract was executed on June 25, 1883. It is expected that a similar order will be executed shortly under this appropriation for the last of the granite required for the basement, front steps, and court-yard walls of the building.

Following is a tabular statement of the contracts in force and entered into during the year:

Date of contract.	Subject of contract.	Name of contractor.	Amount of contract.	Present condition.
1881.				
May 10	Cast-iron door and window finish and wash-boards.	Joseph Hall & Co	$47,836, for doors and windows, 65 cents to $1.50 per foot for wash-board.	Completed.
Sept. 1	Sand	John B. Lord	90 cents per cubic yd.	In force.
Oct. 27	Lime	Wm. Cammack	$1,220.50	Completed.
Nov. 5	Bronze balusters and newel posts.	E. Henry & Bonnard	$6,011	Do.
26	Plastering and stucco work.	Ezekiel Smith	$15,760.97	Do.
1882.				
Feb. 23	Mahogany and pine doors	A. H. Andrews & Co	$8,159	Do.
Mar. 13	Bronze hardware	Hopkins and Dickinson Manufacturing Company.	$3,119 10	Do.
13	Hydraulic elevator	Otis Bros. & Co	$15,500	Do.
24	Marble tiles, border, and door slabs.	Vermont Marble Company.	$6,658.07	Do.
Apr. 26	Picture rods and fittings	Joseph Newmann	$1,096.20	Do.
26	Gas fixtures	Mitchell, Vance & Co	$1,401.25	Do.
May 10	Marble mantels	Adolph Klaber	$1,568	Do.
10	...do	A. L. Fauchere & Co	$2,012	Do.
10	...do	Chas. E. Hall & Co	$4,320	Do.
25	Gas chandeliers	Cornelius & Co	$6,679	Do.
June 8	Elevator fronts	Manly & Cooper Manufacturing Company.	$1,450	Do.
24	Area elevator	Geo. C. Howard	$700	Do.
	CONTRACTS ENTERED INTO DURING THE YEAR.			
1882.				
July 5	Parquetry floors	Groocock & Co	$1,500	Do.
15	Decorative painting	C. Otto Ficht	$2,900	Do.
31	Grates and fire-place trimmings.	Wm. H. Jackson & Co	$1,289	Do.
Sept. 2	Cut granite	Albert Ordway	Not to exceed $156,000.	In force.
25	...do	Davis Tillson	$59,648.17	Do.
25	Bluestone flagging	Acker & Co	$12,164.58, estimated.	Do.
Oct. 19	Cut granite	Bodwell Granite Company.	$1,533.49	Completed.
Nov. 7	...do	Bodwell Granite Company.	Not to exceed $165,000.	In force.
1883.				
Mar. 9	Excavation	Wm. H. Adams	$2,349	Completed.
20	Pebbles	John B. Lord	$1.60 per cubic yard.	In force.
20	Cement	Jas. H. McGill	$1.09 per barrel	Do.
May 9	Cut granite	Ellsworth & E. Bluehill Granite Company.	$1 per cubic foot	Do.
June 25	...do	Albert Ordway	Not to exceed $210,000.	Do.

OTHER OPERATIONS.

By act of Congress approved August 5, 1882, it was required "that the partition wall separating the corridors of the first, second, third, and fourth stories of the east wing from the said stories of the south wing * * * shall be removed, so as to afford easy access from one wing to the other." The walls were accordingly removed, and the openings thus made finished off in August and September, 1882; and in November wire screens and doors were put up in the corridors on the dividing lines between the State and the other Departments.

In February, 1883, the brick partition in the basement corridor between the east and south wings was removed, and the opening finished uniformly with the corridors.

With a view of clearing the field for the coming operations on the west and center wings, as well as to make permanent provision for the numerous telegraph, telephone, and other electric wires needed by the three Departments occupying the building, several small telegraph poles and many air-strung wires were removed, and in their stead one stout pole was erected on the northwest corner of Seventeenth and G streets, from which an 8-inch cast-iron pipe-conduit was laid under ground directly across Seventeenth street to the west end of the north wing. A cable of twenty wires was carried down this pole and through the conduit to the sub-basement of the building, where it was connected to a main system of wires, which was run along the ceiling of the sub-basement and connected to the several Department telegraph offices, telephones, &c. This work was done in March and April, 1883.

PROBABLE OPERATIONS FOR FISCAL YEAR 1883–'84.

It is expected that the approaches of the north wing will be entirely completed, including the adjacent sidewalks, during the fall of the present year, 1883.

For the west and center wings it is expected that the site will be cleared in March by the demolition and removal of the old building of the Navy Department, that the excavations for foundations will be completed in the spring of 1884, and that before the close of the fiscal year the concrete foundations will be laid and the masonry of the court-yard coal vaults and area walls well under way. By that time all the cut granite for the area walls, sub-basement, and the lower half of the basement walls, and of the first and second stories of the front walls, will probably be delivered on the ground. No interruptions may therefore occur in the masonry work for want of stone, as has frequently been the case heretofore from deficiency of funds to procure it in good season.

STATEMENT OF FUNDS.

Total amount expended to July 1, 1883:	
On north wing	$1,816,190 94
On west and center wings	153,133 13
Balance of appropriation on hand July 1, 1883	858,656 53
New appropriation required to continue the construction of the west and center wings for the fiscal year ending June 30, 1885	500,000 00

THOS. LINCOLN CASEY,
Lieutenant-Colonel, Corps of Engineers,
United States Army, in charge.

Hon. ROBERT T. LINCOLN,
Secretary of War.

BUILDING MONUMENT AT YORKTOWN, VIRGINIA.

BUILDING MONUMENT AT YORKTOWN, VIRGINIA.

ANNUAL REPORT FOR YEAR ENDING JUNE 30, 1883.

UNITED STATES ENGINEER OFFICE,
70 SARATOGA STREET,
Baltimore, Md., September 6, 1883.

GENERAL: I have the honor to forward herewith the annual report for the year ending June 30, 1883, for building the monument at Yorktown, Va.

Very respectfully, your obedient servant,

WM. P. CRAIGHILL,
Lieutenant-Colonel of Engineers, U. S. A.

Brig. Gen. H. G. WRIGHT,
Chief of Engineers, U. S. Army, Washington, D. C.

[First indorsement.]

OFFICE CHIEF OF ENGINEERS,
UNITED STATES ARMY,
September 17, 1883.

Respectfully submitted to the honorable the Secretary of War.

H. G. WRIGHT,
Chief of Engineers, Brigadier and Brevet Major General.

ANNUAL REPORT FOR YEAR ENDING JUNE 30, 1883.

After the centennial celebration in October, 1881, the site and foundations of the monument were left in the care of a watchman, without expense to the United States, as this watchman found himself sufficiently compensated by being permitted to live in the small building on the grounds.

Cession of jurisdiction over the site was made by an act of the legislature of Virginia, approved April 21, 1882. The deed, act of cession, and plat were recorded in the office of the clerk of the county of York. On the 27th of June, 1882, instructions were received from the Secretary of War to proceed with the preparations for the building of the monument, with an injunction that no expense be incurred beyond the amount available of the existing appropriation.

September 20, 1882, payment of $3,000 was made to the commission of artists for the design for the monument, which had been prepared by them and approved in 1881 by the joint committee of Congress empowered by law to choose a design. The Secretary of War gave authority about the same time that the same commission of artists, consisting of Mr. R. M. Hunt, Mr. Henry Van Brunt, and Mr. J. Q. A. Ward, be requested to finish their design in all its details, and to obtain tenders

among competent persons for the completion of the work, the contract when approved to be executed by the engineer officer in charge. The propositions of the Secretary of War were accepted by the commission through their chairman, Mr. Hunt.

Some delay was occasioned in further proceedings on account of the temporary absence, during part of the autumn of 1882, of Lieutenant-Colonel Craighill, Corps of Engineers, on duty on the Pacific coast. A consultation with him was requested by the chairman of the commission October 19, 1882, which was had early in November. Specifications and drawings were prepared and proposals for furnishing materials and building the monument were called for by advertisement dated November 27, 1882. Copies of the specifications and drawings are appended.

The proposals were opened in New York at the office of Mr. Hunt, January 4, 1883, in presence of himself, Mr. Ward, Lieutenant-Colonel Craighill, a number of bidders, and several representatives of the press. Report of the fact was made the same day to the Chief of Engineers. January 11, 1883, a careful abstract of the bids was forwarded, with a comparison of them, as will appear from the following letter:

UNITED STATES ENGINEER OFFICE,
70 SARATOGA STREET,
Baltimore, Md., January 11, 1883.

GENERAL: I have the honor to forward herewith an abstract of the bids received January 4, made out on a copy of the advertisement and specifications, for building the monument at Yorktown, to which I referred in my letter of that day. A copy of each of the bids is also herewith, as required by the regulations.

The call was for proposals for granite. No. 5, being for a different material than granite, is therefore, for the present at least, excluded from consideration.

We may also exclude from present consideration, it is thought, bids 1, 2, 3, 7, and 9, on account of their being decidedly higher than 4, 6, and 8.

For *incised letters* No. 8 is the lowest, but I know nothing of the Hallowell stone and cannot recommend its use without further examination. It is a very pretty granite quite white, and would probably answer well if its color can be depended on. But it is reported to discolor badly under exposure. Nor am I *assured* of its sufficient strength and durability.

It will be observed that paragraph 6 of the specifications calls for alternate estimates, depending upon the manner of executing the inscriptions, whether by raised or incised letters.

I decidedly prefer the raised letters, but this is a point on which I think the judgment of the commission of artists should be followed, especially as the difference in cost is not very great. I believe they also prefer raised letters, but I am not certain.

If raised letters be used, the No. 6 bid is $63,750, and No. 8 $67,375. That is to say, No. 6 is the lowest. The No. 6 stone is abundantly strong and durable for the mass of the monument, and in my judgment would answer for that purpose, the figures to be of Westerly granite (see paragraph 5 of specifications). But I believe the commission of artists do not like the appearance of No. 6 stone. They judge it, however, from a small cube, and might conclude differently if a large structure of it were seen by them.

While thus submitting the principal points, I think the respective merits and demerits of the several varieties of stone require further examination before a choice is made among them. This will receive immediate attention, and definite recommendations will be submitted as soon as possible.

Very respectfully, your obedient servant,

WM. P. CRAIGHILL,
Lieutenant-Colonel of Engineers.

Brig. Gen. H. G. WRIGHT,
Chief of Engineers U. S. Army, Washington, D. C.

Abstract of proposal for building Yorktown Monument.

[Opened at 12.02 p. m., January 4, 1883.]

No.	Name.	Address.	Price.	How soon after date of contract will commence to deliver cut-stone work.	Time.		Remarks.
					Commence—	Complete—	
1	Daniel C. Hutchinson	Boston, Mass., 137 Chambers street.	$74,000 00	9 months*	Jan. 20, 1883	July 4, 1884	The granite to be from Hallowell, Richmond, Ellsworth, and Blue Hill, Maine, as may be required.
2	John T. Rowe, president Mount Waldo Granite Works.	Frankfort, Me., and 171 Temple Court, 5 Beekman street, New York City.	74,500 00	3 months	Feb. 1, 1883	Feb. 1, 1884	Only one proposal. Bond in duplicate. Copy of proposal and original bond accompanies this abstract.
3	R. Snowden Andrews, president Westham Granite Company of Virginia.	P. O. box 177, Richmond, Va., and 106 South street, Baltimore, Md.	74,987 87	90 days		July 1, 1884	Raised letters with polished faces.
			73,487 87	....do		July 1, 1884	Incised, sunk letters, 1½ inches deep.
							In letter accompanying proposal engages "to furnish for the crowning figure and drum *statuary granite* that shall be at *at least equal* to (Westerly) in every particular for the purpose."
4	E. H. Lowry, secretary Bodwell Granite Company.	Rockland, Me	60,436 00	400 days	On receipt of drawings.	Oct. —, 1884	Raised polished letters $5 each extra = $7,440, making bid with such letters $67,876.
5	George Doyle, agent Hallowell Granite Company.	Hallowell Me., and 683 Broadway, New York City.	58,500 00	540 days	Oct. 1, 1883	July 1, 1884	This bid is to build not of granite, but of *Bedford limestone.*
6	Davis Tillson	Rockland, Me	60,000 00	1 year	Apr. 1, 1883	Sept. 1, 1884	
			63,750 00				If letters on die are raised and polished.
7	Brown, McAllister & Co	New York, N. Y.	115,000 00	90 days	Mar. 15, 1883	Mar. 15, 1885	
8	J. R. Bodwell, president Hallowell Granite Company.†	Hallowell, Me	59,487 00	400 days		Oct. 1, 1884	All of Hallowell granite.
			59,935 00	....do		Oct. 1, 1884	With statuary of Westerly granite.
					On receipt of contract and drawings.		$5 per letter extra for raised letters with polished face = $7,440, making bid on this basis $67,375.
9	E. C. Sargent, agent Concord Granite Company.	Boston, Mass	99,550 00				Informal. This bid is by letter and not in the form of proposal. It is not accompanied by bond or advertisement or specification.

*One copy of the proposal has this 9 *days*. No bid for raised letters as requested.

†Contract with J. R. Bodwell, president of Hallowell Granite Company.

Final recommendations as to the award of the contract were made February 3, as appears from the following letter:

UNITED STATES ENGINEER OFFICE,
70 SARATOGA STREET,
Baltimore, Md., February 3, 1883.

GENERAL: I have the honor to inclose a copy of the opinion of the commission of artists as to the granite they prefer for the Yorktown Monument, dated January 31, received by me to-day.

They specifically recommend Hallowell granite, which means that referred to in bid No. 8 (see the abstract sent with my letter of January 11, 1883). This is the lowest bid, if incised letters be used for the inscription. The cost of this would be $59,487 or $59,935. They decidedly prefer, however, raised letters, for which alternate bids were asked and received (see paragraph 6 of specifications, copy inclosed). If raised letters be used, bid No. 6 is the lowest, $63,750, No. 8 then becoming $66,927 or $67,375. But the commission object to the No. 6 granite as being positively unfitted for statuary purposes and probably unfitted for other parts of the monument.

Paragraph 5 of the specifications states: "The crowning figure and the drum to be of the statutary granite of Westerly, R. I. The remainder of the monument to be of light-colored granite."

No. 6 could not strictly be called "a light-colored granite." Bid No. 6 does not specifically propose to have the "crowning figure and the drum of Westerly granite," nor is it understood that General Tillson (No. 6) has arranged to procure it, though under a strict construction of his bid he could probably be compelled to obtain Westerly granite for the "statuary and drum."

The commission prefer to have the monument built entirely of Hallowell granite, though it was not contemplated by the specifications (5) that it should be all of one kind. It will be observed, however, that No. 8, besides complying with the specifications in making a proposal for the use of two granites, gives also an alternate proposal for a monument wholly of one granite.

Three main qualities of the granite are to be considered in selecting the stone for the monument—strength, durability, and color as to suitableness and permanence. Either No. 6 or No. 8 would have abundant strength and durability. The artists, whose judgment ought to rule as to color, decidedly object to No. 6 and recommend No. 8.

After very carefully weighing all the points in the specifications, bids, regulations, &c., it is recommended that the contract be awarded to bidder No. 8, the monument to be entirely of Hallowell granite, and letters to be raised; cost, $66,927.

If this be deemed inadmissible without violation of the rights of No. 6, then it is recommended that the bid of No. 8 be accepted for a monument all of Hallowell granite, with letters incised; cost, $59,487.

Very respectfully, your obedient servant,

WM. P. CRAIGHILL,
Lieutenant-Colonel of Engineers.

Brig. Gen. H. G. WRIGHT,
Chief of Engineers, U. S. A., Washington, D. C.

OFFICE OF RICHARD M. HUNT, ARCHITECT,
154 NASSAU STREET,
New York, January 31, 1883.

SIR: We, the undersigned, commissioners on design of the Yorktown Monument, recommend that the Hallowell granite be used in its construction, it being sufficiently good for statuary purposes to warrant its use throughout the entire structure—a very desirable feature.

Of all the other samples of granite submitted to the commission, none are fit for statuary purpose excepting the statuary granite of Westerly, R. I., and that of the Westham Granite Company, Richmond, Va., both of which are considerably higher in price.

The bid of the Hurricane Granite Company, Rockland, Me., on the other hand, is somewhat lower (should raised instead of sunken letter be used for the inscriptions on the die, which the commission strongly recommend), but this granite is not suitable for statuary purposes, and we fear that even the accessory carving could not be rendered with proper effect on account of its coarse grain and mottled appearance.

We remain, respectfully, yours,

R. M. HUNT.
HENRY VAN BRUNT.
J. Q. A. WARD.

Hon. ROBERT T. LINCOLN,
Secretary of War, Washington, D. C.

The decision of the Secretary of War was received February 16, the accepted bidder being the Hallowell Granite Company, the monument to be of Hallowell granite, and the letters of the inscription to be raised, at a total cost of $66,927.

After correspondence with the granite company of Hallowell, Me., to obtain names, &c., of bondsmen, and after investigation of their suitableness, the necessary papers were made out and sent to the president of the company, March 9, 1883. There was delay in completing them, owing to the absence of a bondsman whose father had died. Meantime no expense whatever was incurred by the United States, and the delay was of no special importance at that season. The contract is dated March 30, 1883, and was approved by the Chief of Engineers, April 10, 1883.

Since that time a few of the stones have been gotten out of the quarry and some progress has been made in the preparation of the models for the work of the sculptors.

At the date of this report the contractor is entering actively upon the quarrying and cutting of the stone and the preparation of the models, and is about to arrange for the reception of materials at Yorktown and its placing in the structure, so that the whole may be completed by the expiration of the contract time, October, 1884. It is expected the monument will be ready by the 103d anniversary of the great event it is to commemorate.

WM. P. CRAIGHILL,
Lieutenant-Colonel of Engineers, U. S. Army.

PROPOSALS FOR BUILDING YORKTOWN MONUMENT.

[Office of Richard M. Hunt, architect, Tribune Building.]

NEW YORK, *November* 27, 1882.

Proposals for building the monument at Yorktown, Va., will be received until noon of January 4, 1883, and opened immediately thereafter.

Blank forms, specifications, and information can be had on application to this office.

RICHARD M. HUNT,
Chairman of the Commission on Design.

Specifications of the work and materials required in the completion of the Yorktown Monument, at Yorktown, Va., in conformity to the plans furnished by Richard M. Hunt, architect, Tribune Building, New York City, and under the supervision of Lieut. Col. Wm. P. Craighill, Corps of Engineers, No. 70 Saratoga street, Baltimore, Md.

1. The contractor to furnish and set complete the monument, in accordance with the drawings Nos. 1 and 2, from the level of the foundation now built to the apex, entirely of granite of approved quality, wrought, set, and completed in conformity to these specifications. Full size detail drawings will be furnished the contractor.

2. QUALITY OF THE GRANITE.—All the granite to be of first quality, light in tone, and even in color, close grained, good texture, free from cracks, seams, flaws, iron marks, discolorations, and defects of every kind, and of the dimensions required by the drawings.

3. SOURCE OF SUPPLY.—The quarry from which it is proposed to obtain the granite must be fully opened, and capable of furnishing the quantity and dimensions required by the drawings.

4. CUTTING OR DRESSING.—All the exposed faces from the foundation to the base of shaft to be fine ten steel hammered work; and from base of shaft to apex fine eight steel hammered work; best style of cutting, as per sample to be seen at this office, or at the office of the supervising engineer. All beds and joints to be worked true and fair, perfectly out of wind, and to have an equal bearing throughout, as per sample, and to be worked so that when set the joints will not exceed three-sixteenths of an inch thick; the cut faces, margins, arrises, mouldings, washes, champfers, drips, &c., must be sharp, true, and clean, in strict accordance with the drawings and full size details and models. The bed joints of the fitting in blocks of steps, die, &c., to be as above specified. The vertical joints to average one-half inch in thickness, and nowhere to extend more than three inches in length, with a thickness of more than one inch.

5. SCULPTOR'S WORK.—The allegorical figure crowning the monument, the alto-relievi of thirteen figures surrounding the drum, the capital, shield and palm, bands and stars on shaft, and the four bas reliefs, one on each tympanum of the die, to be cut by skilled men after models to be approved by the commission; said models to be made by the contractor in the city of New York, under the supervision and to the satisfaction of the commission, at a scale not less than six inches to the foot; said models to be cast in plaster of Paris and to remain the property of the commission. The drum bearing the figures in relief will be two courses in height, not more than four blocks in each course, breaking joints; the upright joints to follow outline of figures as may be directed, and to be concealed as much as possible. The crowning figure and the drum to be of the statuary granite of Westerly, R. I. The remainder of the monument to be of light-colored granite.

6. INSCRIPTIONS, &C.—The inscriptions on the four sides of the die (hereinafter contained) to be incised, sunk letters, 1½ inches deep, cut true and sharp. (Alternate estimates to be furnished for raised letters, with polished faces, one inch projection.) The inscription on the drum to be in raised letters, with polished faces; the thirteen stars on the drum to be slightly raised and polished.

The following are the inscriptions on the die:

Front.

AT YORK ON OCTOBER 19 1781
AFTER A SIEGE OF NINETEEN DAYS
BY 5500 AMERICAN AND 7000 FRENCH TROOPS OF THE LINE
3500 VIRGINIA MILITIA UNDER COMMAND OF GENERAL THOMAS NELSON
AND 36 FRENCH SHIPS OF WAR
EARL CORNWALLIS
COMMANDER OF THE BRITISH FORCES AT YORK AND GLOUCESTER
SURRENDERED HIS ARMY
7251 OFFICERS AND MEN 840 SEAMEN 244 CANNON AND 24 STANDARDS
TO HIS EXCELLENCY GEORGE WASHINGTON
COMMANDER IN CHIEF OF THE COMBINED FORCES OF AMERICA AND FRANCE
TO HIS EXCELLENCY THE COMTE DE ROCHAMBEAU
COMMANDING THE AUXILIARY TROOPS OF HIS MOST CHRISTIAN MAJESTY IN AMERICA
AND TO HIS EXCELLENCY THE COMPTE DE GRASSE
COMMANDING IN CHIEF THE NAVAL ARMY OF FRANCE IN CHESAPEAKE

Rear.

ERECTED
IN PURSUANCE OF
A RESOLUTION OF CONGRESS ADOPTED OCTOBER 29 1781
AND AN ACT OF CONGRESS APPROVED JUNE 7 1880
TO COMMEMORATE THE VICTORY
BY WHICH
THE INDEPENDENCE OF THE UNITED STATES OF AMERICA
WAS ACHIEVED

Side.

THE TREATY
CONCLUDED FEBRUARY 6 1778
BETWEEN THE UNITED STATES OF AMERICA
AND LOUIS XVI KING OF FRANCE
DECLARES:
THE ESSENTIAL AND DIRECT END
OF THE PRESENT DEFENSIVE ALLIANCE
IS TO MAINTAIN EFFECTUALLY
THE LIBERTY SOVEREIGNTY AND INDEPENDENCE
ABSOLUTE AND UNLIMITED
OF THE SAID UNITED STATES
AS WELL IN MATTERS OF GOVERNMENT AS OF COMMERCE

Side.

THE PROVISIONAL ARTICLES OF PEACE
CONCLUDED NOVEMBER 30 1782
AND THE DEFINITIVE TREATY OF PEACE
CONCLUDED SEPTEMBER 3 1783
BETWEEN THE UNITED STATES OF AMERICA
AND GEORGE III KING OF GREAT BRITAIN AND IRELAND
DECLARE:
HIS BRITANNIC MAJESTY ACKNOWLEDGES THE SAID UNITED STATES
VIZ. NEW HAMPSHIRE MASSACHUSETTS BAY RHODE ISLAND AND
PROVIDENCE PLANTATIONS CONNECTICUT NEW YORK
NEW JERSEY PENNSYLVANIA DELAWARE
MARYLAND VIRGINIA NORTH CAROLINA
SOUTH CAROLINA AND GEORGIA
TO BE FREE SOVEREIGN AND INDEPENDENT STATES

The following are the inscriptions on the drum:

ONE COUNTRY. ONE CONSTITUTION. ONE DESTINY.

7. DEFECTS.—All stone must be cut to lie on its quarry bed. Patching or hiding defects by any method will not be allowed, and all defective work or material will be rejected.

8. SETTING.—Lafarge cement to be used throughout. No cement to be used except on the day it is made. All stones to be floated in cement. Each course to be thoroughly bedded in mortar, and all vertical joints completely filled solid. Joints to be neatly struck flat—no lewis holes to show. The stones composing the courses from and including the top course of the die to the base of the shaft of column to be clamped together with gun-metal clamps one inch thick, three inches broad, and twelve inches long, with ends turned down three inches. The crowning figure to be bolted down by a gun-metal bolt 3 inches in diameter, extending 12 inches into bottom of statue and running down 11 feet and 6 inches through the top courses; 12 feet 6 inches total length. The three capping stones in pediments on each side of die to be secured by type metal dowels, run in a molten state, as may be directed.

9. CLEANING DOWN.—The entire monument to be cleaned down with water, &c.

10. SCAFFOLDING.—Required to be built entirely of new materials of sufficient strength for the purpose intended, and to be approved by the supervising engineer.

11. CLASS OF WORK.—The entire work to be of the best character executed by skilled labor and to the entire satisfaction of the architect and the supervising engineer. All questions arising out of this contract shall be decided by the United States agent in charge, and his decision shall be final and conclusive.

12. The work will be conducted under the direction of the United States agent, who shall have power to prescribe the order and manner of executing the same in all its parts; of inspecting and rejecting materials, work, and workmanship, which, in his judgment, do not conform to the drawings that may be furnished from time to time, to the models, or to these specifications. And any material, work, or workmanship so rejected by him shall be kept out of or removed from the finished work, and no estimate or payment shall be made until such material, work, or workmanship be so removed.

13. The United States have the right and privilege to appoint an inspector to examine and to report upon any materials, work, and workmanship pertaining to the work, who will receive instructions from the United States agent. This inspector shall have power to object to any materials, work, or workmanship. Any material, work, or workmanship objected to by the inspector shall be kept out of or removed from the finished work, unless in each particular case the objections of the inspector

shall be overruled by the United States agent, and unless the objection be so overruled, no estimate or payment shall be made until such material, work, or workmanship be so removed.

14. Within thirty days after the completion of the work, and before the final payment shall be made, the contractor shall remove from the site all scaffolding, rubbish, old and unused material, and leave the whole in perfect order and condition.

15. The contractor is not to take advantage of any omissions of details in specifications, models, or drawings, but will be required to do everything necessary to complete the work.

16. The bid should state the sum in United States currency for which the entire job will be completed, including materials, labor, scaffolding, tools, machinery, implements, moulds, models, transportation, apparatus, and appliances of every description necessary or proper to or for the due performance of the work and the true and faithful execution of the contract.

17. Partial payments on the contract will, however, be made on each delivery for parts actually delivered and accepted, of a proportionate part of the contract price for the entire work to be determined by the United States agent.

18. CONDITIONS OF BIDDING.—Parties obtaining the drawings must return them within fifteen days from date of receipt of same. Any bids received from parties not complying with this requirement will not be considered. Each bidder must submit with his proposal, properly labeled, samples of the granite he proposed to furnish; the samples to be 6 inches by 6 inches by 6 inches on face, showing natural fracture, and the others the different grades of cutting. Also to state in his bid the time when he will commence the delivery of the cut-stone work. The time in which the contractor proposes to commence the delivery, and the quality of the granite, as well as the time of the completion of the whole job, to be considered in awarding the contract. Samples of cutting to be executed on the granite work may be seen at this office or at the office of the supervising engineer.

GENERAL INSTRUCTIONS FOR BIDDERS.

19. All bids must be made in *duplicate* upon the printed forms furnished by this office, and be accompanied by a copy of this advertisement and specifications.

20. The bond attached to each bid must be signed by two responsible sureties, to be certified to as good and sufficient guarantors, by a United States district attorney, collector of cutoms, or of any other officer under the United States Government or responsible person known to the office. The bond to proposal must be not less than 10 per cent. of the whole amount of the proposal.

21. The sureties are to make and subscribe affidavits of justification on the back of the bond; the sum in which they jointly justify to be double the amount of the penalty. A firm will not be accepted as a surety, nor will a partner be accepted as surety for a copartner or for a firm of which he is a member. An officer of a corporation will not be accepted as surety for such corporation.

22. When firms bid, the individual names of the members should be written out, and should be signed in full, giving the Christian names, but the signers may, if they choose, describe themselves in addition as doing business under a given name and style as a firm.

23. All signatures must be witnessed and have affixed to them seals of wax or wafer.

24. The place of residence of every bidder, with county and State, must be given after his signature, which must be written in full.

25. All prices must be written as well as expressed in figures.

26. A percentage of 10 per centum will be retained from each payment until the completion of the contract; except where (as in cases in which no payment is to be made until a work is completed) such percentage may, in the opinion of the officer in charge, properly be dispensed with.

27. The contract which the bidder and sureties promise to enter into shall be, in its general provisions, in the form adopted and in use by the Engineer Department of the Army, blank forms of which can be inspected at this office, and will be furnished, if desired, to parties proposing to put in bids. Parties making bids are to be understood as accepting the terms and conditions contained in such form of contract.

28. Reasonable grounds for supposing that any bidder is interested in more than one bid for the same item will cause the rejection of all bids in which he is interested.

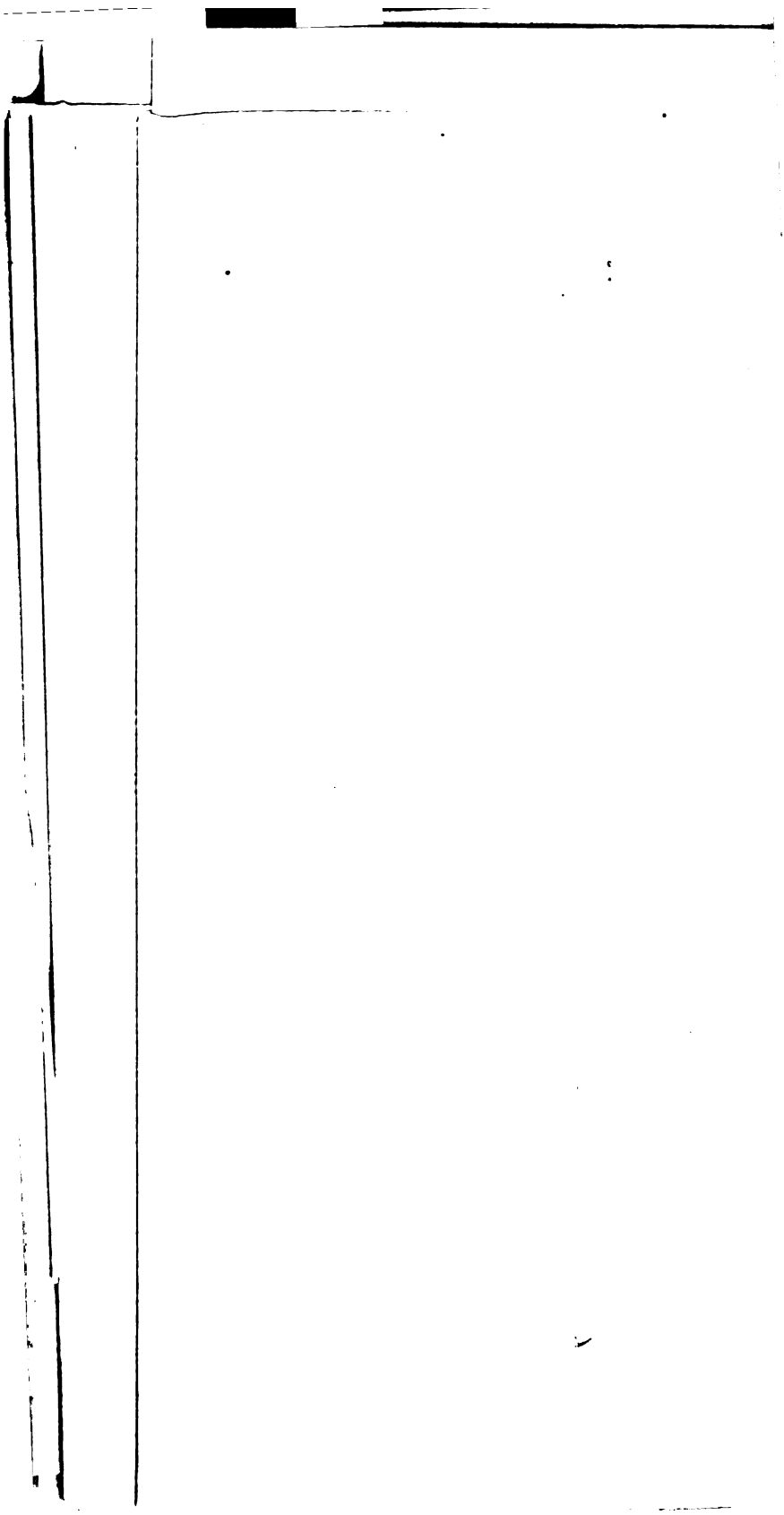
29. *The United States reserves the right to reject any and all bids; also to disregard the bid of any failing bidder or contractor, known as such to the Engineer Department.*

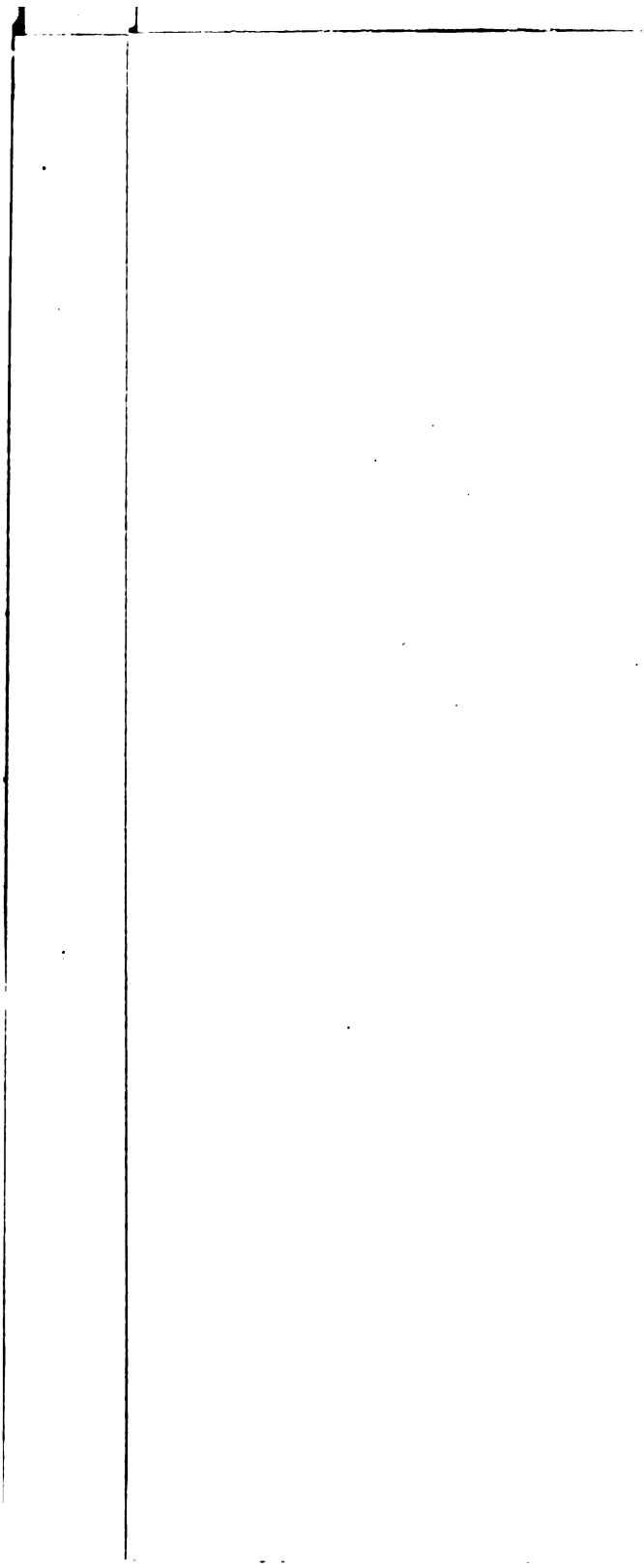
30. The bidder must satisfy the United States of his ability to furnish the material or perform the work for which he bids.

31. Transfers of contracts, or of interests in contracts, are prohibited by law.

32. In submitting proposals, the sealed envelopes must be so endorsed as to indicate, before being opened, the particular work for which the bid is made.

33. All blank spaces in the proposal and bond must be filled in.





34. Make out proposals and bond in duplicate, and place in an envelope marked "Proposals for building a monument at Yorktown, Va.," and enclose this in another envelope addressed to R. M. Hunt, architect, Tribune Building, New York City.

35. The contractor should within ten days from the award of the contract furnish this office with the post-office address to which communications should be sent.

36. A copy of this advertisement and specifications will be attached to the contract and form a part of it.

RICHARD M. HUNT,
Chairman of the Commission on Design of the Yorktown Monument.

[Forms.]

PROPOSAL FOR BUILDING YORKTOWN MONUMENT IN GRANITE.

——— ———, 188–.

To Mr. R. M. HUNT,
Architect, Tribune Building, New York, N. Y.:

SIR: In accordance with your advertisement of November 27, 1882, inviting proposals for building a monument at Yorktown, Va., and subject to all the conditions and requirements thereof, and of your specifications, dated November 27, 1882, copies of both of which are hereto attached, and, so far as they relate to this proposal, are made a part of it, we (or I) propose to furnish all the materials and perform all the work necessary and proper to construct and complete in granite the monument at Yorktown, Va., in conformity with the plans, models, and drawings, and with such directions as may from time to time be received from the United States agent, for the sum of ——— dollars.

We (or I) will commence the delivery of the cut stone work within ——— days from the date of the contract.

We (or I) propose to commence the work on or before ———, 188–, and complete the same on or before ———.

We (or I) make this proposal with a full knowledge of the kind, quantity, and quality of the articles required, and, if it is accepted, will, after receiving written notice of such acceptance, enter into contract within thirty days from the date of said notice, with good and sufficient sureties for the faithful performance thereof.

[Signature.] ——— ———.
[Address.] ——— ———.
[Signature.] ——— ———.
[Address.] ——— ———.
(Signed in duplicate.) ——— ———.

BIDDER'S BOND.

Know all men by these presents, that we, ——— ———, of ———, as principal, and ——— ———, of ———, and ——— ———, of ———, as sureties, are held and bound unto the United States of America in the penal sum of ——— dollars, to the payment of which sum, well and truly to be made, we do bind ourselves, our heirs, executors, and administrators, jointly and severally, firmly by these presents.

Given under our hands and seals this ——— day of ———, 188–.

The condition of this obligation is such that whereas the above-bounden ——— ———, in response to a public advertisement and notice dated November 27, 1882, and given and published by Richard M. Hunt, architect, has made and presented to Richard M. Hunt, architect, a formal proposal, in writing, whereby he has proposed and agreed to enter into a contract with Lieut. Col. William P. Craighill, Corps of Engineers, United States Army, acting for and representing the United States, to build a monument at Yorktown, Va., according to the terms and conditions set forth in said advertisement and notice:

Now, therefore, if the said ——— ——— shall not withdraw ——— said proposal within sixty days from the date of opening the proposals, and shall, within thirty days from the date on which ——— may be notified that ——— said proposal has been accepted and the said contract awarded to ——— (provided such award be made within the sixty days above mentioned), duly and formally enter into such contract agreeably to the terms of ——— said proposal, and into such bond for its due performance as shall be required of ———, or if ——— proposal shall not be accepted and such contract not be awarded ———, then this obligation shall be void; otherwise,

that is to say, if either ——— shall withdraw ——— proposal within said sixty days, or fail to enter within said thirty days into such contract if awarded ———, and into such bond, to remain in full force, effect, and virtue.

——— ———. [L. S.]
——— ———. [L. S.]
——— ———. [L. S.]

Witnesses:
——— ———.
——— ———.
——— ———.

(Executed in duplicate.)

STATE OF ———, *County of* ———, *ss:*

I, ——— ———, one of the sureties named in the within bond, do swear that I am pecuniarily worth the sum of ——— dollars, over and above all my debts and liabilities.

[Signature of surety.] ——— ———.

Before me,

Signature of officer administering oath, with seal, if any. ——— ———.

STATE OF ———, *County of* ———, *ss:*

I, ——— ———, one of the sureties named in the within bond, do swear that I am pecuniarily worth the sum of ——— dollars, over and above all my debts and liabilities.

[Signature of surety.] ——— ———.

Before me,

Signature of officer administering oath, with seal, if any. ——— ———.

I, ——— ———, do hereby certify that ——— ——— and ——— ———, the sureties above named, are personally known to me, and that, to the best of my knowledge and belief, each is pecuniarily worth, over and above all his debts and liabilities, the sum stated in the accompanying affidavit subscribed by him.

[Signature of certifying official.] ——— ———.

NOTE.—The certificate may be given separately as to each surety, and modified accordingly.

REPORT ON EDUCATION IN THE ARMY.

REPORT

ON

EDUCATION IN THE ARMY.

SAINT LOUIS, MO., *October* 12, 1883.

SIR: I have the honor respectfully to transmit herewith my annual report on the subject of education.

Very respectfully, your obedient servant,

GEO. G. MULLINS,

Chaplain Twenty-fifth Infantry, in charge of Education in the Army.

ADJUTANT-GENERAL UNITED STATES ARMY.

SAINT LOUIS, MO., *October* 12, 1883.

SIR: I have the honor, respectfully, to render my annual report on the subject of education in the Army.

Toward the establishment and organization of new schools little has been done. Some progress has been made in systematizing and rendering more effective those already established.

Considering the up-hillness of this peculiar field, and the want of time and proper facilities, the actual advancement of the cause of education in the Army has been as great as could reasonably be expected. There is to-day a deeper and more widely extended interest in the subject than ever before.

Many of our most intelligent and progressive officers have come to recognize in it a subject worthy their serious consideration; and some of them claim that, as in some countries of Europe, so here, in time of peace, our Army also should be one great educational institution.

About one-half the number of our "overseers" have proved themselves competent, patient, and faithful teachers; have done some hard, good work, and they deserve far greater reward than they have received.

The soldiers and the children who attended the schools appear generally to have made commendable progress in their studies, not at all surpassed by pupils in the common schools of the country.

The post reading-room has become a very popular institution, and is pronounced an indispensable source of profit and pleasure to both officers and enlisted men. It is well supplied with reading matter by the Quartermaster-General's Department, under provision of paragraph 538, Army Regulations, and by generous donations from the Young Men's Christian Association of New York, American Bible Society, Ladies' Union Aid Society, American Tract Society, and the National Temperance Society.

The following exhibit is a synopsis of the consolidated bi-monthly

reports received during the fiscal year ending June 30, 1883, from all the military posts and camps:

Number of enlisted men in garrison	20,158
Number of children over five years of age at all the posts	2,390
Number of schools in operation	106
Number of teachers employed	14

Average daily school attendance.

Enlisted men	1,615
Children of officers	543
Children of enlisted men	1,066
Children of civilians	505
Total	3,729
Attendance in 1882	3,355
Gain	374

NOTE.—The school of forty-eight children of Seminole scouts at Fort Clark, Texas, is taught by a teacher paid from the county public school fund.

NOTE.—The children at eleven posts attend public schools in the vicinity, and they are not counted in this report.

NOTE.—At five posts the children attend "parochial schools." These schools are supported by contributions from enlisted men and officers. No reports come from them.

NOTE.—At three posts, as no competent enlisted men could be obtained, the officers and enlisted men employed teachers at $50 per month.

Number of posts that have school-houses of some kind	106
Number of posts that have no available room for school	22
Amount of money appropriated during the year for building and repair of school-houses and chapels	$4,344 00
Number of chapels and school-houses built by authority of the Hon. Secretary of War since the passage of sec. 1231, Revised Statutes United States	58

READING-ROOMS.

Number of posts and camps supplied with reading matter	130
Number of quarterlies, monthlies, semi-monthlies, weeklies, and dailies subscribed for and sent regularly to the reading-rooms	2,240
Aggregate cost	$8,751 34
Average daily attendance	4,500
Number of volumes in all the post libraries	50,096
Number of volumes purchased during the year, by post fund	4,386
Number of volumes circulated monthly	24,200

NOTE.—Many of the regiments have large and choice regimental libraries, of which no account is given in these reports.

LIGHTS.

The lamps and oil allowed, per existing regulations, to light chapels, school-houses, and reading-rooms, are insufficient; and, to meet a want which is an urgent necessity, I most respectfully recommend that the allowance be more than doubled. It would surely be wise and beneficent economy to make these places as cheerful and attractive as possible.

CORPS OF TEACHERS.

It is conceded by all interested that our greatest want is a suitable corps of teachers. Additional legislation is needed to make fully effective the law of 1866.

During the last Congress a bill was introduced and favorably reported to the House by the Military Committee, providing for 150 school teachers in the Army, who should have the rank and pay of commissary sergeants. This legislation has twice been recommended by the Secretary of War and by the President. Since the matter was crowded out or simply deferred on account of what were deemed affairs of weightier national importance, I would respectfully recommend that the Hon. Secretary of War again ask for the enactment of this very important bill.

COMPULSORY EDUCATION.

The number of officers who favor compulsory education seems to have greatly increased during the year. It is urged that the attendance of enlisted men at school be viewed a military duty, and be made compulsory. This to be enjoined by a General Order to the whole Army, including all enlisted men, *until* they can pass a certain examination and bear a certificate showing that they have attained the prescribed standard of education. I would have that education involve reading, writing, arithmetic, geography, English grammar, physiology, and especially the history of the United States. Such a standard would to-day send full one-half of the Army to school.

So long as attendance is merely voluntary, and but a privilege anxiously commended by his superiors, the average soldier will not attend school, however much he may need do so! By habit of his life he learns to look with indifference or contempt upon anything that has no military order attached to it. He wants an explicit order for each specific duty. To convince him that anything is right and good for him as a soldier to do, it must be ordered!

Experience in the Army in past years has demonstrated that compulsory attendance upon school is no grievous burden; and that, with few exceptions, the enlisted men obey the mandatory call to school just as cheerfully as they perform any military duty. Those who have tried compulsory education have realized such great and varied benefits to the garrison, that they are its warmest advocates.

REPORTS.

Some officers (commanding) seem to have failed ever to note the instructions printed upon the back of the blank forms of bi-monthly reports. I have been embarrassed in my work from time to time by receiving only partial reports from the posts named in the inclosed list.

SUPPORT OF SCHOOLS.

To make the educational system in the Army successful in any great degree, it is evident that Congress must be asked for annual appropriations for support of the schools, in order that all the proper facilities be supplied; and that the small post fund be relieved of this tax. By the present arrangement the school supplies are distressingly inadequate, and are obtained only with much difficulty and delay.

INSPECTION OF SCHOOLS.

By paragraph 41, General Order No. 24, Headquarters Army, Adjutant-General's Office, Washington, May 18, 1878, it appears to have been the intention of the War Department, concerning the schools, to see that

the best methods of management and instruction should be adopted, and that uniformity of system should be established. To that end an officer was to visit and inspect regularly the various post schools.

All distinguished educators recognize the fact that it is impossible to have any very efficient educational work and system without some such supervision; and that school inspections must necessarily be made by a practical teacher, especially fitted and set apart for that work. Inasmuch as many of our schools are but poorly organized and managed, and the teachers know little of the superior advantages of the best modern methods of instruction, I most respectfully recommend that the officer in charge of education be authorized to proceed to visit each post in the Army, beginning with the Department of the South—remaining long enough at each place to inspect school, library, and reading-room; to organize the school and introduce the best methods; and by lectures to the command arouse an interest in the subject of education. I am confident that this ought to be done, and that great good might thereby be accomplished.

SUNDAY AFTERNOON BIBLE AND SONG SCHOOLS.

Persuaded that "the schoolmaster and the Bible are the hope of this Republic," with the hearty approval of the Hon. Secretary of War, it has been my aim to place into the hands of every soldier and every child in all our military posts the Bible and the History of the United States, and to see that each is able to read them. It is believed that a knowledge of these volumes can but conduce to a warm patriotism and a noble life.

At a good number of posts Bible and song schools have already been established. They are well supplied with Bibles, Testaments, song books, and cabinet organs; and for the most part are conducted by officers and the wives of officers. The cost to the Government has been nothing, save the price of transportation of the articles donated.

In this wise and beautiful work out on the frontier we are greatly indebted to the societies previously mentioned for their very liberal and timely assistance.

I am, sir, very respectfully, your obedient servant,

GEO. G. MULLINS,

Chaplain Twenty-fifth Infantry, in charge of Education in the Army.

Hon. SECRETARY OF WAR,

Washington, D. C.

List of military posts, in whose partial bi-monthly school reports the printed instructions are habitually ignored.

1. Bayard.
2. Bennett.
3. Bidwell.
4. Brady.
5. Boise Barracks.
6. Cœur d'Alene.
7. Craig.
8. Cummings.
9. Garland.
10. Hall.
11. Halleck.
12. Huachuca.
13. Laramie.
14. Lewis.
15. Lyon.
16. Maginnis.
17. McDermitt.
18. Myer.
19. Newport.
20. Presidio San Francisco.
21. Selden.
22. Snake River.
23. Stanton.
24. Stevens.
25. Totten.
26. Townsend.
27. Uncompahgre.
28. Union.
29. Vancouver.
30. Verde.
31. Wadsworth.
32. Walla Walla.
33. West Point.
34. Columbus Barracks.

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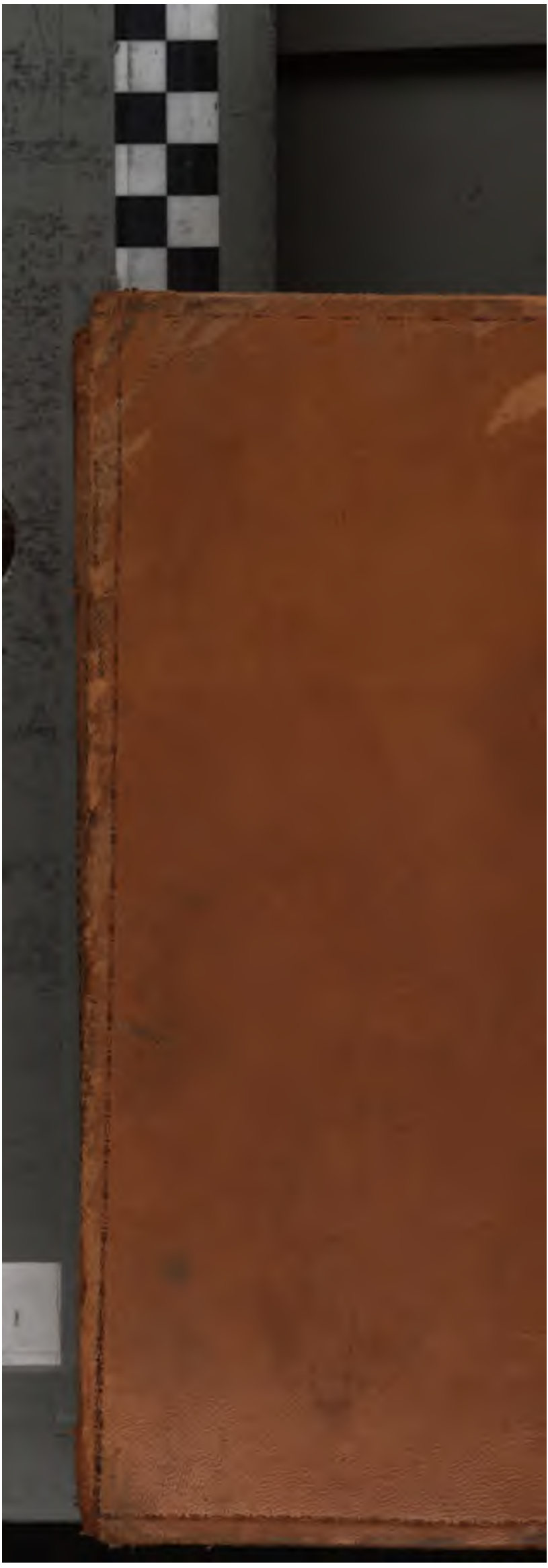
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